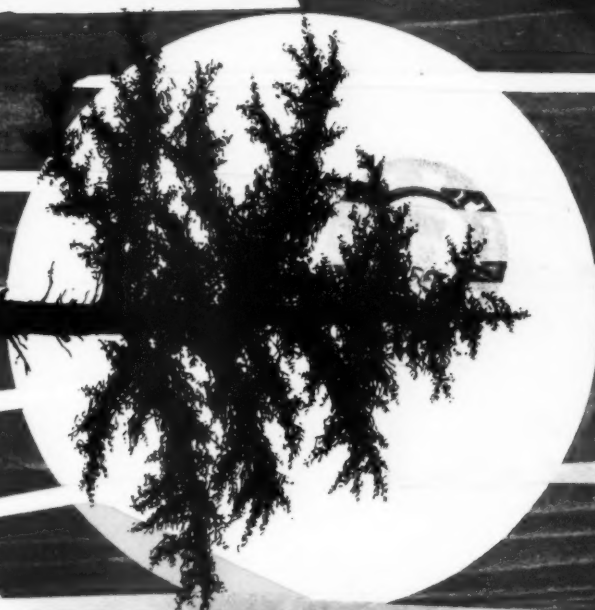


MODERN PACKAGING



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How packaging

products

an American way of life

JUNE 1966



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9 adhesives protect a cigarette's fine taste

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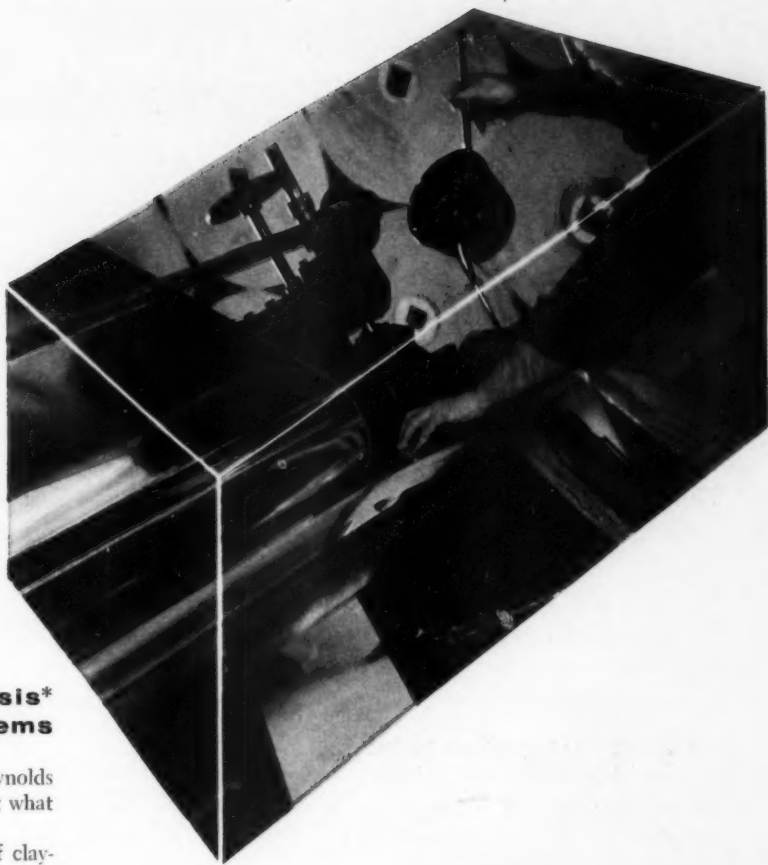
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JUNE 1956

MODERN PACKAGING

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Modern Packaging Executive and Editorial Offices 575 Madison Avenue, New York 22, N.Y.

Modern Packaging published monthly by Modern Packaging Corp., at Emmett St., Bristol, Conn. Modern Packaging Encyclopedia Issue published as second issue in November by Packaging Catalog Corp. at Emmett St., Bristol, Conn. Second-class mail privileges authorized at Bristol, Conn. Subscription rates (including Modern Packaging Encyclopedia Issue, which is not sold separately), payable in U.S. currency: In U.S., its possessions, and Canada, 1 year \$6, 2 years \$11, 3 years \$15; Pan-American countries, 1 year \$10, 2 years \$17, 3 years \$24; all other countries, 1 year \$20, 2 years \$36, 3 years \$50. Single copies 75 cents each (Show Issue, \$1) in U.S., its possessions, and Canada; all other countries \$2 (Show Issue, \$2.50). © Reg. U.S. Pat. Off.

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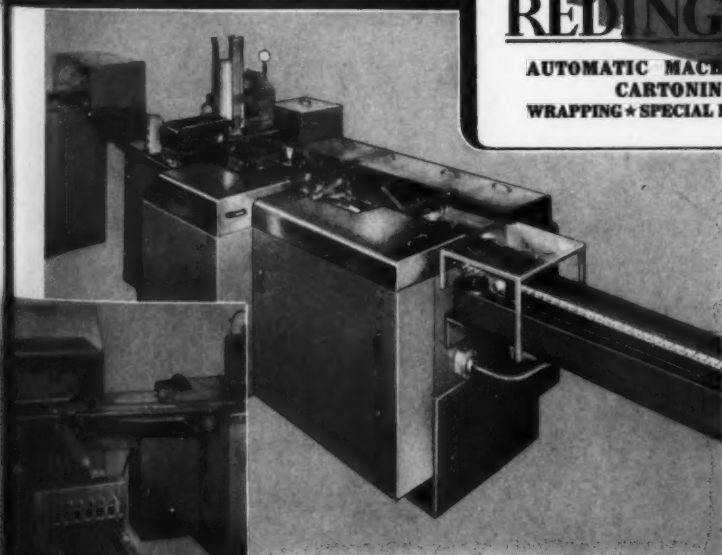
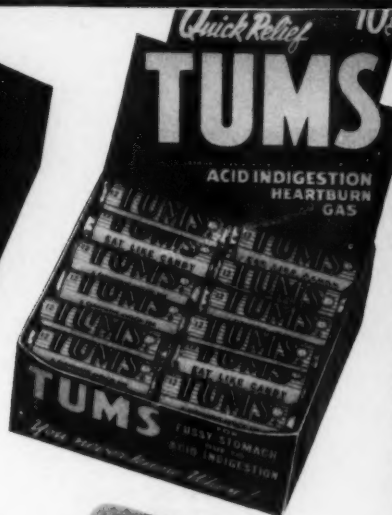
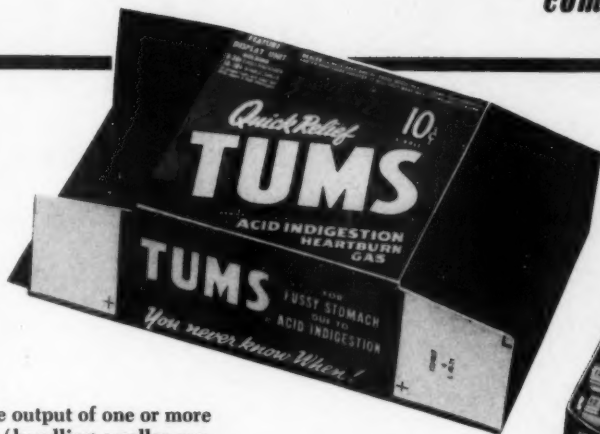
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MODERN PACKAGING

The wild blue yonder

It's nice that the National Packaging Exposition has grown big enough to attract coverage by New York newspapers, wire services and national news magazines. That's a measure of growing public interest in packaging, in which all of us can find satisfaction.

It's too bad, though, that the type of thing that catches the eye of these once-a-year reporters all too often is a flight of fancy far removed from the practicabilities of commercial packaging.

Example: Three of the five items which *Time* magazine chose to feature in its April 23 report on the Atlantic City show—seriously represented as “startling innovations” and “shopper stoppers”—have never stopped a shopper yet and have little immediate prospect of doing so.

The professor at Cornell may have a sound idea in his proposal to substitute polyethylene for nature's eggshell. We don't know. He has demonstrated that it *can* be done. But should it be? Will it be? Are there real advantages sufficient to offset the cost? Until these questions are answered, no one should take it too seriously.

Packaging individual martinis and manhattans in plastic envelopes or cups is a cute convention stunt, although not exactly new. There's only one rub: You can give 'em away, but you can't sell 'em—not under present liquor laws. So write that one off, so far as commercial practicability is concerned.

Reporters were intrigued, too, with the idea of having slices of bacon rolled on a continuous strip of aluminum foil, to be unrolled like tape. Nobody, apparently, told them that this was a purely imaginary package, with no evidence as to whether it could be done economically or whether the consumer—contrary to all previous experience—would buy bacon sight unseen.

The point is: Nobody told them. They didn't know. The editors of *Time*, the *New York Herald Tribune*, the *New York Times* and other responsible media accepted the reports as factual and presented to their millions of readers as packages of today what are, at best, packages of day-after-tomorrow.

The automobile manufacturers have their experimental “dream cars.” But when they display them at a public show they are clearly labeled “*Experimental; not in production.*”

We are heartily in favor of the kind of package development work that similarly looks far into the future. Thinking and experiment should not be confined to immediate practicability. But let's draw a sharp distinction between experiment and actuality. In the pursuit of headlines, let's not get lost in the wild blue yonder.

The Editors



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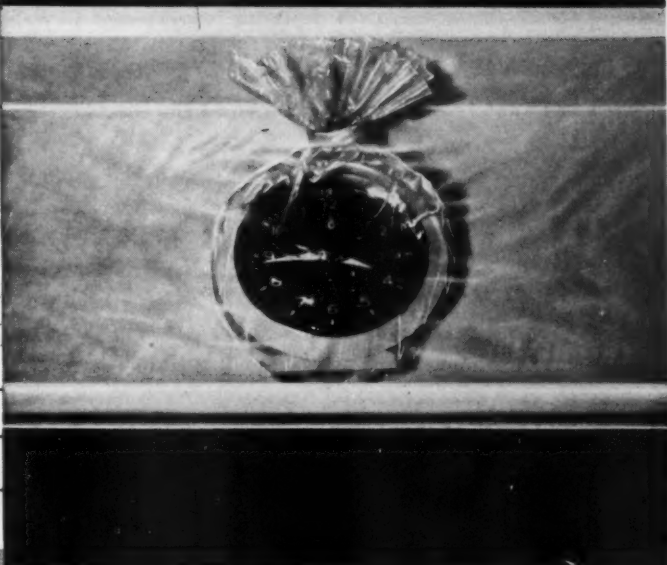
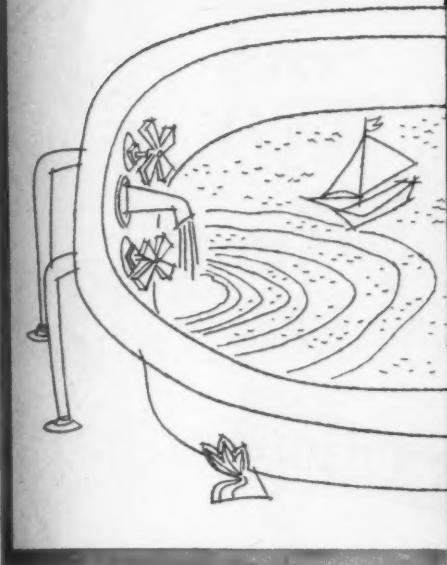


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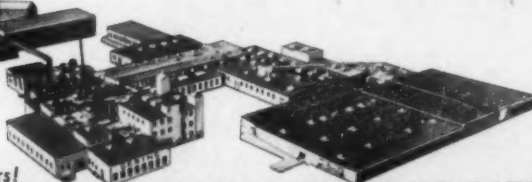
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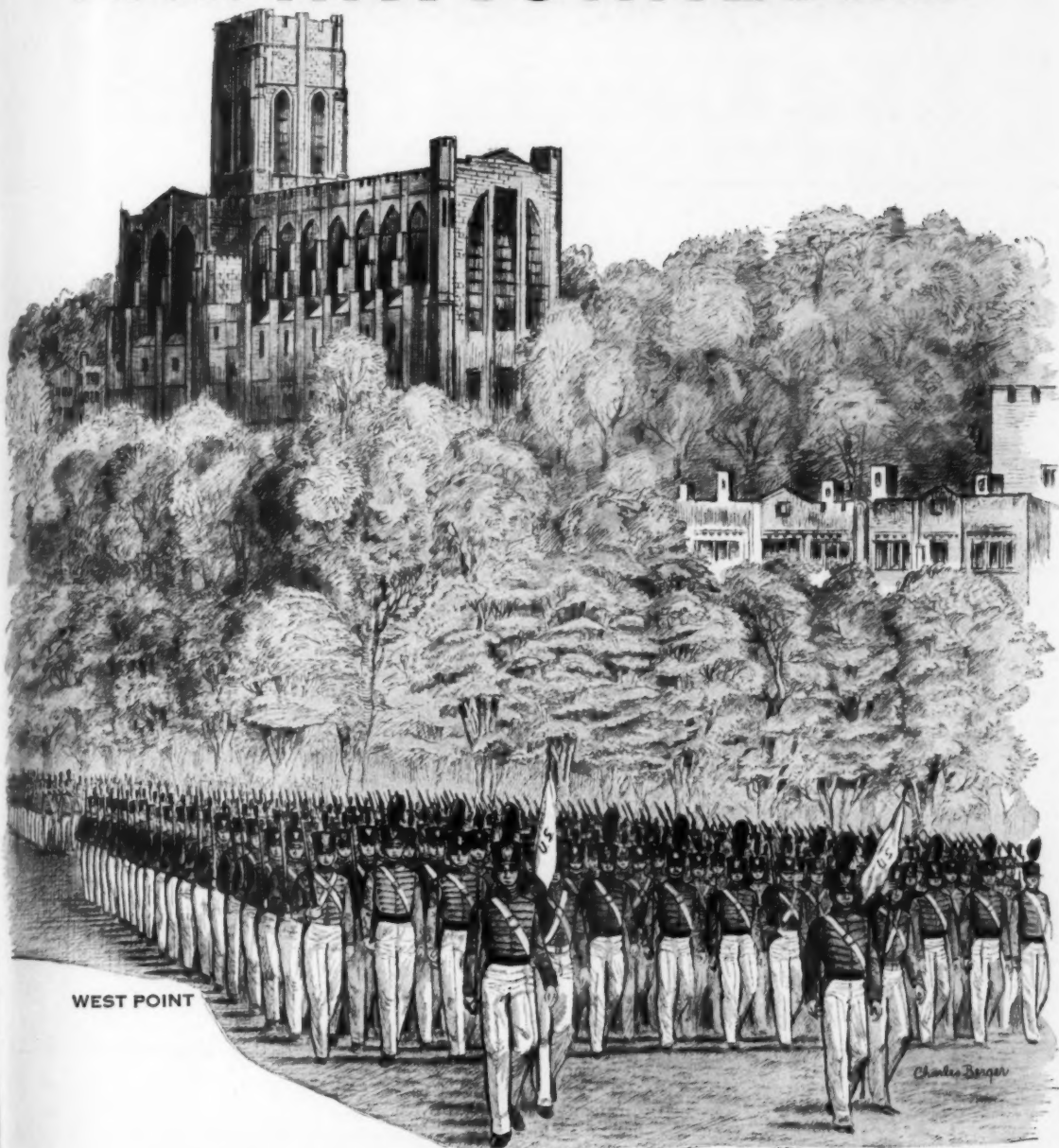
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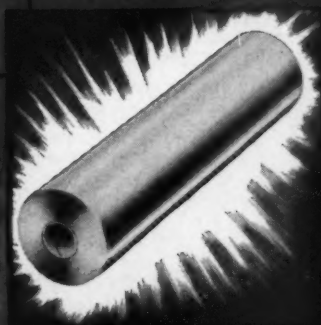
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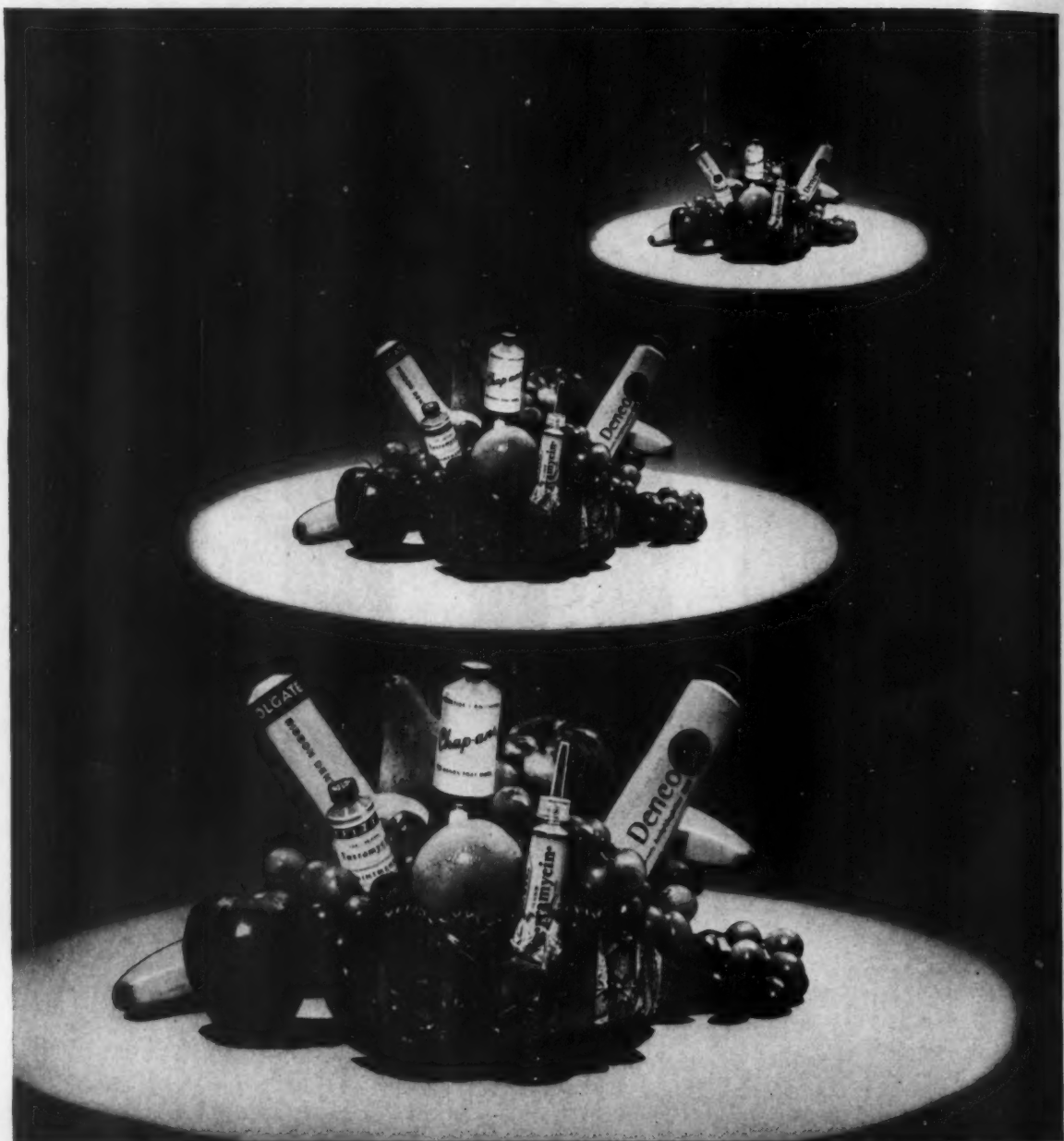
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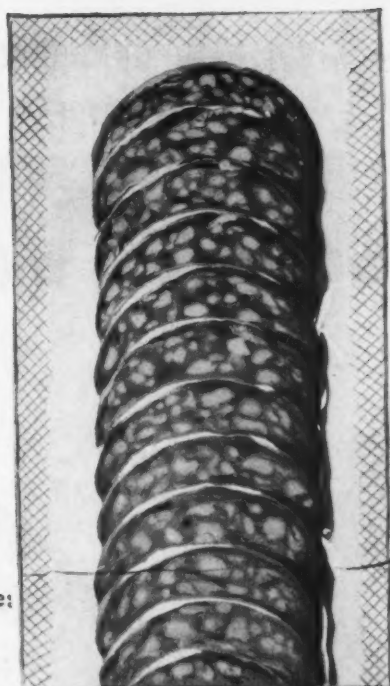
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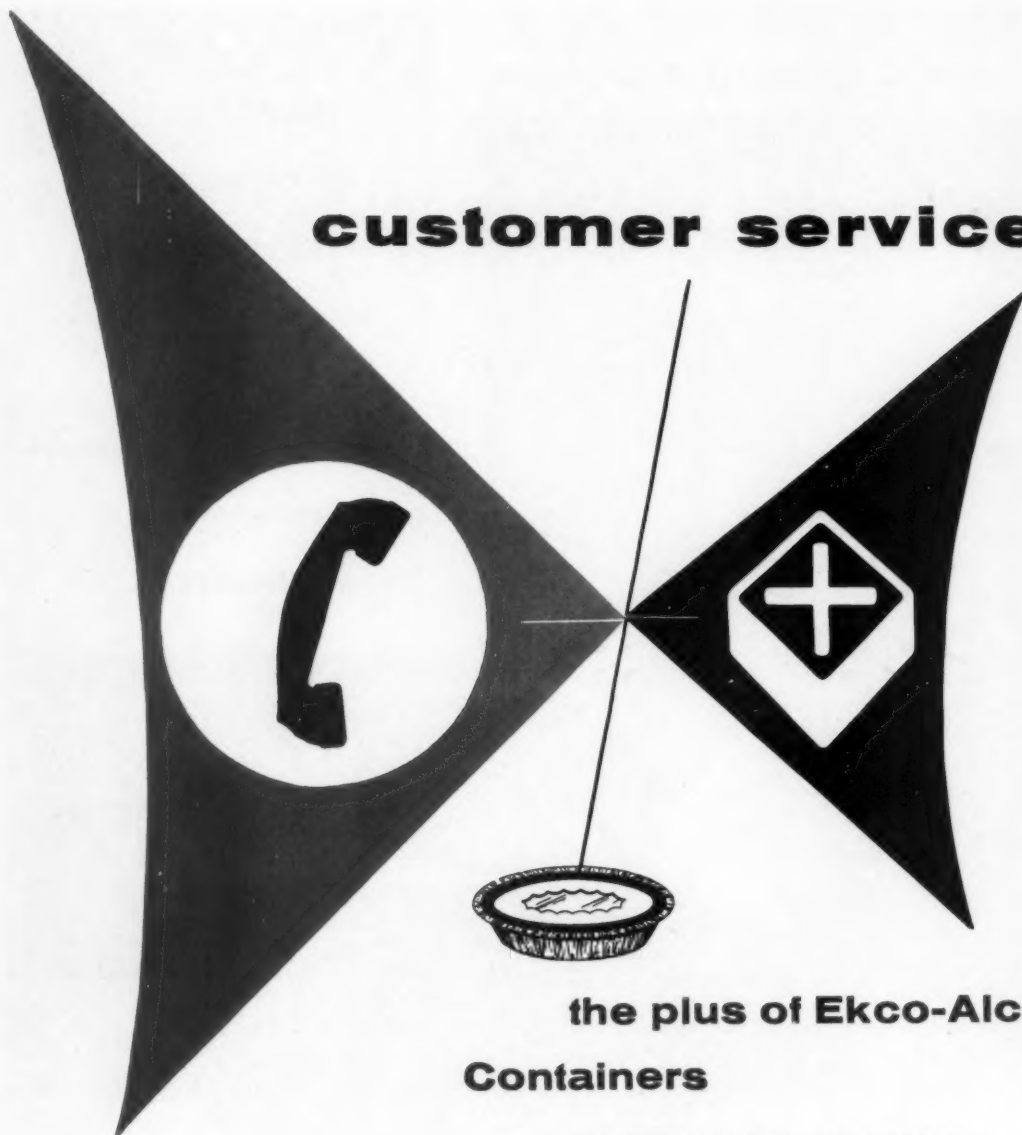
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**the plus of Ekco-Alcoa
Containers**

Our primary concern is how we can help you.

Ekco-Alcoa Containers maintains the largest exclusive rigid aluminum foil container field force in the industry, backed up by . . .

- men of all the sciences pertaining to your product
- the greatest container production capacity
- the widest variety of stock container dies
- the greatest flexibility of facilities, to assure you the number of containers you want when you want them.

When you require information or technical assistance, call our field representative, or your nearest distributor.

The Plus Container



trademark

EKCO-ALCOA CONTAINERS Inc.

1900 North River Road • River Grove, Illinois

EKCO is the registered trademark of Ekco Products Company, ALCOA is the registered trademark of Aluminum Company of America. The corporate name and combination mark, EKCO-ALCOA, is used under license to the manufacturer by each of these companies.

MYLAR®—A TOUGH FILM for tough packaging jobs



**Now frozen foods are heated right in the package
thanks to new Du Pont MYLAR®**

Lichow's famous restaurant in New York has introduced an exciting packaging idea: A retail unit of prepared frozen foods in a laminated bag employing "Mylar" polyester film. This unique innovation offers speed, convenience and cleanliness by having the food heated *right in the package*.

This development is made possible by the amazing properties of Du Pont "Mylar": great strength, dimensional stability, and the ability to withstand extremes of temperature from freezer cold to boiling hot.

Here is another example of how versatile Du Pont "Mylar" can be

put to a wide variety of packaging uses.

"Mylar" may be just what you need to solve a tough packaging problem. Ask your Du Pont representative for particulars on all types of packaging with "Mylar" or mail the coupon for more information on this remarkable film.

*MYLAR is Du Pont's registered trademark for its brand of polyester film.



REG. U. S. PAT. OFF.
**BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY**

DU PONT

MYLAR®
POLYESTER FILM

E. I. du Pont de Nemours & Co. (Inc.)
Film Dept., Room MP-6, Nemours
Wilmington 98, Delaware

Please send me information on packaging uses of "Mylar" polyester film.

Name

Firm

Address

City State

CROWN protects

That old-fashioned flavor
in the "new-fashioned"

PIK-L-BARREL*



The crisp, juicy goodness of Pik-L-Barrel Pickles is sealed in the unusual package with Crown Screw Caps. These are the closures that spin on smoothly and securely on the production line . . . yet are removed readily in the hands of the housewife.

The packer of Pik-L-Barrel Pickles takes good advantage of Crown's exceptional lithographing talents. The closures are decorated in four bright, eye-catching colors . . . and they carry a sales message featuring re-use of the jar.

To be sure of the finest sealing for your finest products . . . contact your Crown Closure "Rep" before placing your next closure order.

CROWN CORK & SEAL COMPANY, INC.

P. O. Box 1837 • Baltimore 3, Md.

Manufacturing Plants: Baltimore • San Francisco



PIK-L-BARREL Pickles have made remarkable sales increases for hundreds of firms. Famous Virginia Foods, Corporation of Lynchburg, Virginia, packer of the PIK-L-BARREL line, attributes their sales success to the unusual merchandising combination of a brand name with consumer appeal and a package designed around that name.



CLOSURES

Approved by
millions of housewives

sealed
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and
ducts
your

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S

es

AGING

Vitafilm

mligatiV



**Builds a crystal-clear case
for fine products—**

by
GOODYEAR
The Finest in Sheer Protection

New Strength, Contact, Wonderful Clarity —Cold Weather and Sunlight Resistance

for smoothly packaged



TEXTILES HARDWARE PAPER PRODUCTS

Did you feel the film on the preceding page? Did you like its non-crackling, smoothly tough texture? Did you note its beautiful clarity? Fine transparency? The host of products it can enhance, protect from rough handling, show to advantage?

Then you have been properly introduced to VITAFILM, the new Goodyear packaging film of Polyvinyl chloride.

But the real clincher is the way this amazing VITAFILM stands the test of time and rough handling.

SUNLIGHT AND ROUGH HANDLING find themselves fought to a virtual standstill by VITAFILM.

CHOOSEY CUSTOMERS can paw away at your product, but long shelf-life and few returnables are insured by this strong and tear-resistant Goodyear discovery.

VITAFILM prints clearly, heat-seals easily — adapts readily to all kinds of automatic packaging machinery.

AND it is available in bags—ideal for light textiles such as sweaters, underwear, ties and shirts.

COULD YOU ASK FOR ANYTHING MORE? Get in touch with the Goodyear Packaging Engineer—and get the best news of all: how little it will cost to put VITAFILM to work for you! Write Goodyear, Packaging Films Dept. R-6418, Akron 16, Ohio.

Vitafilm

a new

The Finest in Sheer Protection!



Vitafilm, a Polyvinyl chloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio



Wright Machines Save You Money



A completely automatic system. Opens and positions the bag. Precision weighs and gently fills. Transfers the bag to the sealer. Speed up to 55 bags per minute. Candy, cookies, crackers, potato chips and similar products.

Wright packaging machinery has one main purpose—to save you money. This they are doing for food, bakery, confectionery, tobacco, drug, and distilling firms throughout the nation.

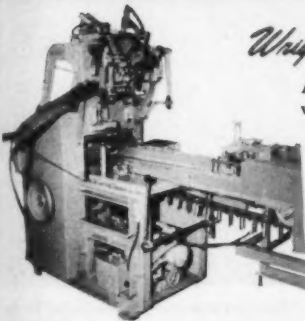
Can they do the same for you? The answer can be found simply and without obligation. Let us study your packaging line. If any of our standard equipment meets your requirements, we will show you the actual dollar savings. Or, if a tailor-made system is needed, we will develop and manufacture it.

Shown here are five examples. They vary in function but all have one common characteristic; they do a faster, more accurate and dependable job at less cost.

Your inquiry is invited.

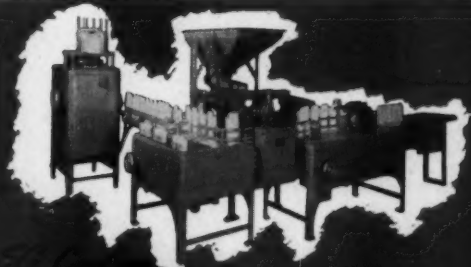
WRIGHT MACHINERY COMPANY

ESTABLISHED 1893 • DURHAM, NORTH CAROLINA
SUBSIDIARY OF SPERRY RAND CORPORATION

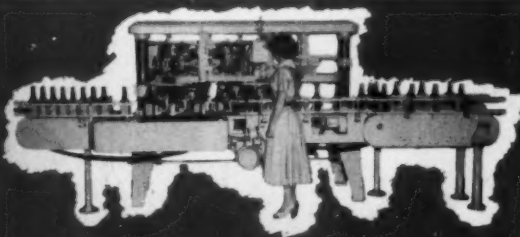


Wright Wrap

Automatically stacks, wraps, seals, and labels cracker sandwiches, fig bars, and cookies. Printed or unprinted cellophane. Tear tab optional. Speeds up to 120 packs per minute.



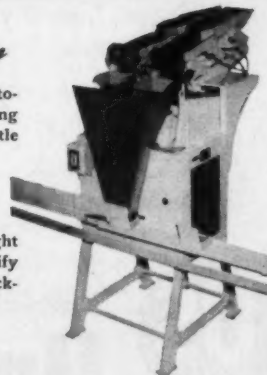
Automatically forms the carton, weighs and fills the product, and closes the carton. A favorite with candy manufacturers packaging dump-fill candies in window boxes.



Automatically applies revenue stamps over the neck of bottles. Standard equipment in all modern distilleries. Speeds up to 140 bottles per minute.

Wright Weighers

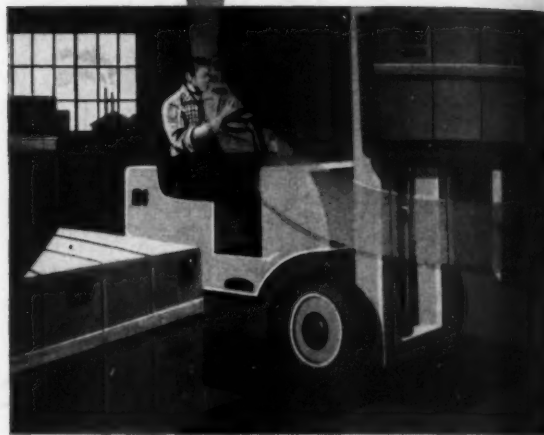
Automatic and semi-automatic weighing and filling machines. Accuracy, gentle product handling, and speed are key features. Literature available on these and all other Wright machines. Please specify your product and type package.





WONDER

U. S. Holdtite are the amazing wonder-working pressure-sensitive tapes for packaging! Applied with just finger pressure, they bind, hold, mask, reinforce, protect and serve as an indispensable tool for hundreds of uses. They are so much a part of the packaging field that the wonder is how packaging ever got along without this wonder-worker line. Well-named, too, because once applied, a U. S. Holdtite tape will never come loose by itself; it must be removed. *It's a tape line that's respected by all packagers everywhere and is the only tape line that will do so much, so well.* Order U. S. Holdtite tapes from your distributor, from any of our 27 District Sales Offices, or write us at Rockefeller Center, New York 20, N. Y.



U. S. Holdtite pressure-sensitive tape holding packages on pallet.



U. S. Holdtite Tape is ideal for special promotions, such as banding two items together. Once applied, they are joined securely.



Mechanical Goods Division

United States Rubber

WORKER! U.S. HOLDTITE®

line of pressure-sensitive tapes!



U. S. Holdtite sealing the lids of chemical fiber drums.



U. S. Holdtite is used by food packers as an airtight seal on bumpy, uneven packages.



U. S. Holdtite holds so strongly it can easily support a full-grown man in a sealed container.



U. S. Holdtite is used by appliance makers to hold products in place and protect costly surfaces during shipment.

Style #501—Crepe paper back. Strongest crepe backing on the market. So flexible it is the one right tape for all curve work. No "feather edge" when used for painting. Strips clean—won't flake or break. Takes up to 200 degrees temperature.

Style #511—Flat paper back. Has TWICE the strength of conventional masking tape. Ideal for straight line masking, also for binding, bundling, and sealing.

Style #503—Crepe paper back. For high temperature baking operations. Takes up to 300 degrees temperature for 1½ hours. A favorite tape on original equipment items.

Style #508—Paper-backed glass filament reinforced tape

with 240-pound tensile strength. The one right tape for strapping and sealing cardboard cartons. Will not work loose. An extremely powerful adhesive that makes tampering and pilfering impossible to conceal. A single strand will hold boxes piled up on a skid.

Style #601—Waterproof cloth tape with plastic coated back. Perfect for waterproof sealing, masking, protecting anything that will be exposed to the weather.

Style #604—An ideal low-cost cloth "expendable" tape for one-time use... protecting tool edges and fittings, bundling parts, keeping wrappings on toys, guarding fragile wood from splitting while being sawed.



How to get Appeal

as well as **POWER**
in your package

Your sales message needs appeal as well as power. A shout is more attention compelling when combined with the appeal of a whisper.

This same truth applies to a printed package. Crossett's new bleached board mill offers you an unequalled opportunity to combine appeal and power by providing a board that is rugged with long fibred pulp for strength and good folding properties, and yet includes short fibred hard-

woods for a smooth surface permitting close register multicolor printing.

Only the most modern cylinder machine coupled with a chlorine dioxide bleach plant can produce this type of custom board to your exact need.

When you become a regular customer for Crossett board, you take title to planned machine time that will assure you an uninterrupted supply in all markets.

May we tell you about it?

CROSSETT
A DIVISION OF



PAPER MILLS
THE CROSSETT COMPANY

GENERAL SALES OFFICE - CROSSETT ADMINISTRATION

BALTIMORE OFFICE
J. W. Taylor
414 St. Paul St.

DALLAS OFFICE
H. E. Manner
3409 Oak Lawn Ave.

CHICAGO OFFICE
L. J. Walker, W. V. Williams
D. W. Schuler
222 West Washington

CINCINNATI OFFICE
S. J. Lantry, A. T. Allen
1814 First National Bank Bldg.



OUR BIG NUMBER IN FOIL IS

8

The number 8 is tops in our industry. We at Specialty Papers have it for printed foil packaging materials. The number is in the scope and flexibility of our 8 color roto-gravure press.

We can print foil

1. in any color combinations up to 8
2. in any color and functional coating combinations up to 8
3. on one or both sides in any combinations up to 8

Besides the wide range of our 8 color roto-gravure press, we can

4. print foil on our other roto-gravure presses
5. print foil on our multicolor flexographic equipment
6. glue and wax laminate foil to your specifications

We can also offer you

7. over 20 years of experience in high fidelity roto-gravure printing on flexible packaging materials

And through our Craddock Plan

8. we can help you on the highly technical problems of designing on foil

Let us work with you on your foil packaging programs. Write for a sample folder of our printed and laminated foil wraps.

THE SPECIALTY PAPERS COMPANY, DAYTON, OHIO
NEW YORK, CHICAGO, BALTIMORE, ATLANTA, OMAHA, DENVER, SAN FRANCISCO, SEATTLE, ROCHESTER, N. Y.

Great Things Happen

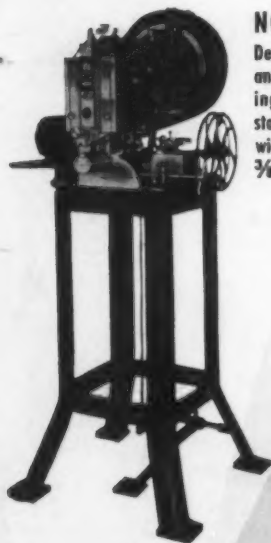
IN SET-UP

BOX PLANTS

**COSTS DOWN
OUTPUT UP**
WITH KNOWLTON MACHINES

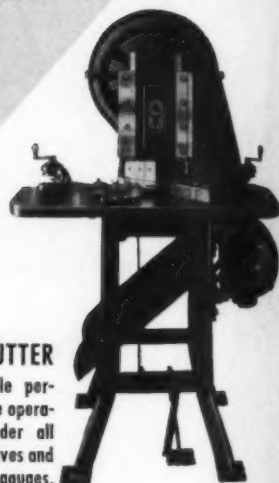
Beset by rising costs, more and more set-up box men are turning to Knowlton for help. The reason? They've heard (*and correctly*) that Knowlton machines are solving production problems and making new profits possible—that users enjoy *important savings* in time and material—turn out quality boxes that have what it takes in today's tough competitive market.

Why not call in your nearest Knowlton man for a complete study of your present operation? The chances are he can recommend a cure for your own particular headache.



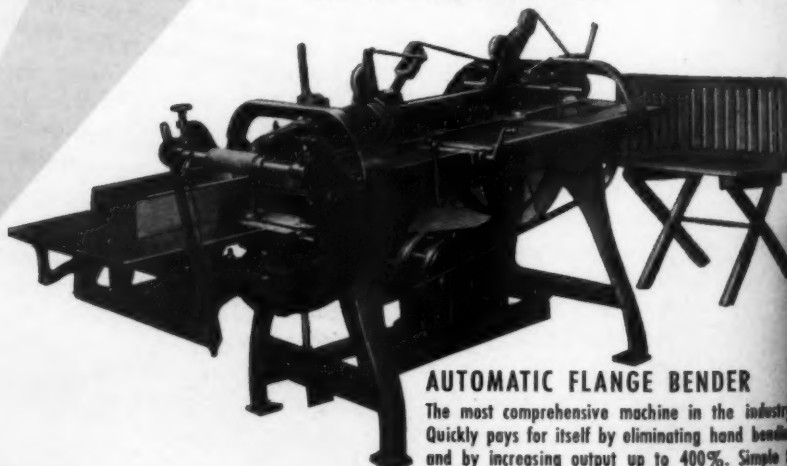
NO. 5 STAYER

Designed, engineered, and built for outstanding service. Applies stay tape up to 1" wide on boxes from 3/4" to 4 1/2" depth.



SINGLE CORNER CUTTER

Unmatched for dependable performance and fast, accurate operation. Minimum waste under all cutting demands. 5 1/2" knives and gear-adjustable precision gauges.



AUTOMATIC FLANGE BENDER

The most comprehensive machine in the industry. Quickly pays for itself by eliminating hand bending and by increasing output up to 400%. Simple to operate—one hand-crank makes all adjustments.



ROCHESTER 14, NEW YORK

BOSTON
637 Massachusetts Ave.
(ARLINGTON)

BROOKLYN
45-53 Beaver St.

CHICAGO
9 S. Clinton St.

TORONTO, CAN.
888 Dupont Street

Pacific Coast Representatives: H. W. BRINTNALL CO., Los Angeles, San Francisco

The dramatic way to get the jump on your competition

With no other boxboard can you enjoy all these advantages:

- * Radiant, mirrorlike gleam and sparkle.
- * Lusterkoted surface (not laminated).
- * Faithful halftone reproduction obtainable on no other board.
- * Finest quality gloss ink printing, bar none.
- * Firm binding of metallic inks.
- * Solid strength that equals or surpasses the strength of ordinary boxboards two to four points heavier.
- * Quick ink setting and drying time, making LusterBoard easier to print and to handle.
- * Smooth folding and superb embossing effects.
- * An all-round superior merchandising package that buyers find irresistible.
- * Range of 14, 16, 18 and 20 points thickness.

Don't wait. Write now for technical information, demonstration pieces and sample boxes. No obligation. Address LusterBoard headquarters: S. D. Warren Company, 89 Broad Street, Boston 1, Mass.



Printing Papers

WARREN'S

LusterBoard

Package your products in

LusterBoard

The Boxboard of
Unparalleled Splendor



SHARPE & DOHME
DIVISION OF MERRICK & CO., INC.
PHILADELPHIA, PA.

DESCRIPTION: "Cremomycin" is a pleasant-tasting suspension combining the bactericidal and bacteriostatic activity of neomycin and sulfasuxidine. Its effect is concentrated in the intestinal tract, and this concentration relieves the irritation and soothes the patient and soothes, protective action of the patient.

FORMULA: Each 30 cc. (1 fl. oz.) contains: Colloidal Neomycin, 3.0 Gm.; Colloidal Sulfasuxidine, 3.0 Gm.; with 0.35% sodium benzoate as preservative base; 300 mg. neomycin base; 300 mg. sulfasuxidine.

DOSEAGE: Infants: 15 to 25 lb., ½ to 1 teaspoon 6 times a day.
Children: 25 to 65 lb., 1½ to 2½ teaspoons 6 times a day.
Adults: 65 to 120 lb., 1 to 1½ teaspoons 6 times a day.
Supplied: In bottles containing 6 fluidounces.

CREMOMYCIN,
a product of
Sharpe & Dohme,
Philadelphia, Pa.,
is packaged in
18 point LusterBoard.

"Poly-Eth" Builds Markets For You:

By showing how polyethylene packages can be re-used at home, this full-page ad dramatizes to the consumer the extra value of polyethylene packaging. This ad is another market-building service of Spencer Chemical Co., makers of "Poly-Eth" Polyethylene. For information on "Poly-Eth" standard or custom-made resins, write us or visit our booth (#237) at the National Plastics Exposition, New York City, June 11th-15th.

High consumer interest in this ad is shown by the fact that more than 3,000 people have written for this booklet—and inquiries are still pouring in.



This "Poly-Eth" packaging ad appeared in Time and Newsweek Magazines, reaching America's top business and industry leaders.

Polyethylene

AMAZING NEW USES
FOR WORLD'S MOST
VERSATILE PLASTIC

A CUSTOMER recently dashed into The Bachelor's Laundry and Dry Cleaning plant in Kansas City, Mo., "Clean it and press it in a hurry!" he urged Proprietor James H. May "I'm going on a fishing trip!"

The story, as related to Mark Stringfellow, Manager of Market Development for Spencer Chemical Company, is only one of many unusual conversations that have taken place since Bachelor's introduced an unique service in his city: its dry cleaning customers now get their clothes back in polyethylene bags. In this case it turned out that the customer was interested, not so much in the tuxedo, as in the wanted to use the polyethylene bag on his fishing trip as a "ground sheet" to put under his sleeping bag.

● May often sees his polyethylene bags come back as transparent covers on the seats of autos using his shop's drive-through service. They come back, too, as laundry bags left by customers.

WISE HUNCH. Early in his business career, May had a hunch: he believed that more and more Americans would be making their final buying decisions, not because of the product alone, but also because of the package it came in.

*A registered trademark of Spencer Chemical Co.



Technical Service Manager Gordon Crowe and "Poly-Eth," Spencer's symbol for polyethylene.

SPENCER CHEMICAL COMPANY
615 Dwight Bldg., Kansas City 5, Mo., Manufacturers of "Poly-Eth" Polyethylene • Ammonia
(Commercial and Refrigeration Grade) • Aqua Ammonia • 85% Ammonium Nitrate Solution
Synthetic Methanol • Formaldehyde • Mercaptan • "Mr. N" Ammonium Nitrate Fertilizer
SPENSOL (Spencer Nitrogen Solutions) • FREEALL (Spencer Dry Ice) • Cylinder Ammonia



James May and Customer: "Tuxedo for a fishing trip . . ."

This would be particularly true, he decided, of highly competitive products and services.

One of the least likely places to prove his point would seem to have been the dry cleaning business Bachelor's added to its laundry operation in 1953. But May was convinced that dry cleaned clothes returned in sturdy, see-through polyethylene bags, at no extra charge to his customers, would attract the extra trade to more than offset the extra cost to himself. That his plan Bachelor's is now doubling the size of his cleaning plant.

SHIRT TALES Polyethylene bags are also starting in big-name department stores across the country. With dry goods packaged in tear-resistant polyethylene and set up in super-market style, customers can pick-and-choose their hearts' content without waiting for a clerk. As a result, they buy more. And—as with May's customers—often they're as excited over the polyethylene bags as over the purchase.

These bags can be used as is, or cut up into sheets. The sheets can be used singly, or joined together by a simple sealing process that takes about a minute. And in one form or another, they're as useful as Aladdin's genie.

COVER-UP JOBS. In sheet form, polyethylene bags can be used as covers for porch or outdoor furniture, records, and household goods; or as garden mulches, book jackets, baby sheets, shower curtains, moth-proof garment bags, transparent slip covers or table cloth covers.

● Traveling men find that even wet shoes or overshoes can be dropped into a polyethylene bag and safely packed in the same suitcase with white shirts. Another bag can hold toilet articles.

● A polyethylene sheet also makes a good temporary pane if a window breaks in bad weather.

DO-IT-YOURSELFER'S PAL. Even the small polyethylene bags in which foodstuffs come are handy in all sorts of ways—such as for storing tools, paint brushes and small parts. Picnickers' food wrappings and covers. "Poly-Eth" bags can even turn an ordinary jar into a home-made thermos bottle.

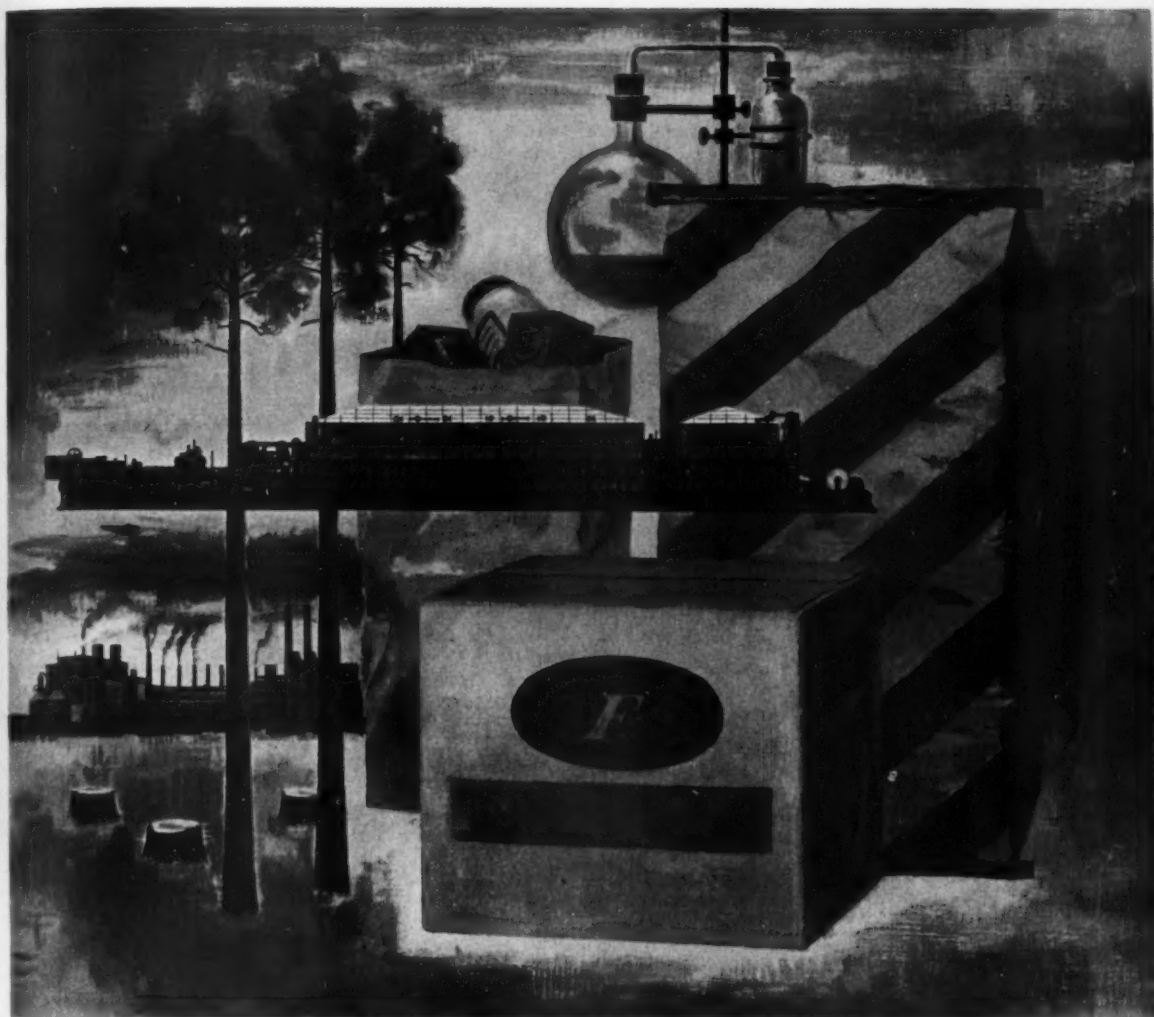
"POLY-ETH" AND YOU. Every day more manufacturers are learning that polyethylene packaging means more sales-compelling appearance and better protection for their products. And, equally important, reusable "Poly-Eth" product. So look for those products with the plus—"Poly-Eth" packaging. And if you make a product that needs "Poly-Eth" packaging, write to Spencer Chemical Company for information about suppliers who can help you.

Free Spencer booklet, "58 Home Uses for Free Polyethylene"

FACTS FREE

If you'd like to know more about "Poly-Eth," check the items below in which you are particularly interested. Then mail this coupon to "Poly-Eth," Spencer Chemical Company, 615 Dwight Bldg., Kansas City 5, Missouri. We'll send you more information by return mail.

- ☐ "58 Home Uses for Free Polyethylene"
- ☐ Polyethylene for Packaging
- ☐ Polyethylene Strawberry Mulching
- ☐ Polyethylene Greenhouses
- ☐ Lawn Sprinkler Systems
- ☐ Farm Water Systems



CONTROLLED QUALITY...

*from tree, to pulp, to paper, to conversion, to customer —
adds up to superior **FROSTKRAFT** packaging*

Every FROSTKRAFT bag and corrugated container is the product of uncompromising quality control by Olin Mathieson... control which extends every step of the way from seedling to finished product.

Olin Mathieson operates vast reserves of prime Southern pine, modern sawmills, pulp and paper mills, converting plants... all producing at top efficiency. By uniting natural resources with manufacturing — forming one

continuous industrial operation — every tough-tempered FROSTKRAFT bag and container is produced under controlled conditions to meet Olin Mathieson's rigid standards of excellence.

Olin Mathieson's long experience in cellulose chemistry, paper making and packaging is at your disposal. Your FROSTKRAFT representative will bring quick, capable assistance in solving your kraft packaging problems. Why not call us today?



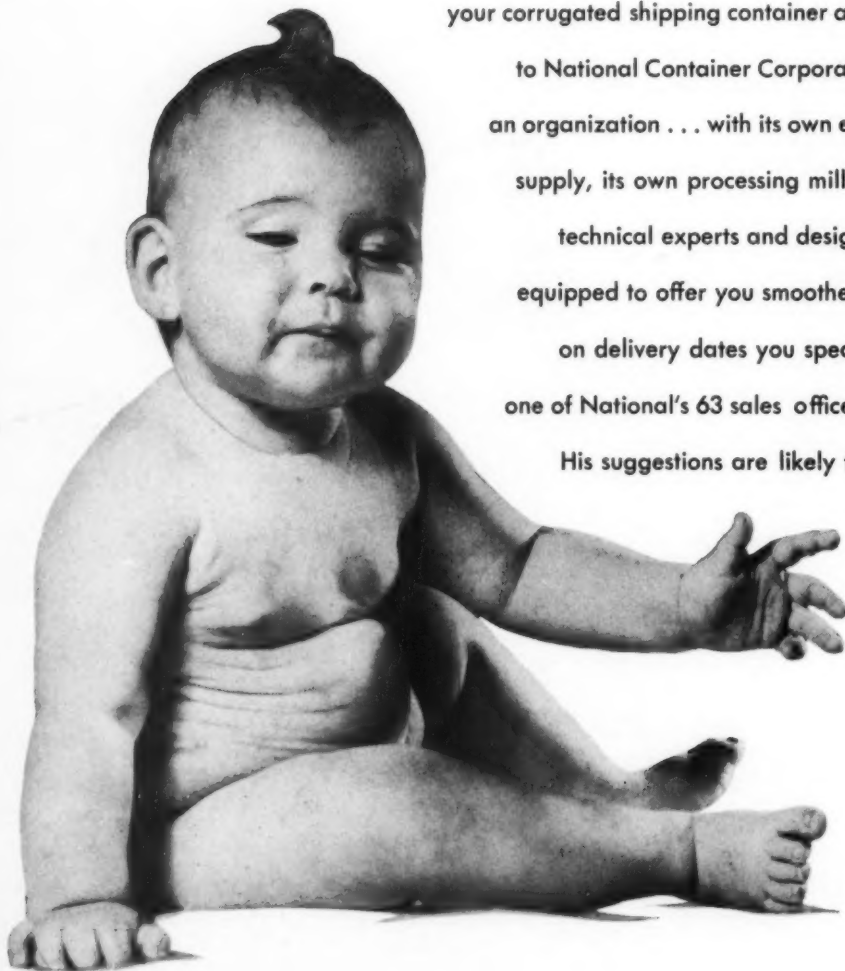
FROSTKRAFT
paper products

FOREST PRODUCTS DIVISION

OLIN MATHIESON CHEMICAL CORPORATION
WEST MONROE, LOUISIANA

It's worth thinking about

Vast advantages can be yours, when you entrust your corrugated shipping container and multiwall bag problems to National Container Corporation. It is obvious that such an organization . . . with its own expanding raw materials supply, its own processing mills, converting plants, technical experts and design staff . . . is equipped to offer you smoother, more competent service, on delivery dates you specify. A phone call to one of National's 63 sales offices will bring an expert. His suggestions are likely to save you money.



NATIONAL CONTAINER CORPORATION

Executive Offices: SEVEN CENTRAL PARK WEST, NEW YORK 23, N. Y.

CORRUGATED PAPER CONVERTING PLANTS • Atlanta, Ga. • Aurora, Ind. • Bradford, Pa. • Bristol (Philadelphia), Pa. • Chicago, Ill. • Dallas, Texas • Detroit, Mich. • Jacksonville, Fla. • Long Island City, N. Y. • Los Angeles, Calif. • Madison (St. Louis), Ill. • Memphis, Tenn. • Miami, Fla. • Milwaukee, Wisc. • Newark, N. J. • Oakland, Calif. • Salisbury, N. C. • St. Paul, Minn.

MULTIWALL BAG PLANTS • Joliet, Ohio • Kansas City, Mo. • Valdosta, Ga.



Background

for

packaging

Notes,
quotes
and comments

Encouraging to note that personal income keeps pace with rising prices. National personal income reached an annual rate of \$313.6 billion in the first quarter of this year, up a notch from the previous quarter and almost 7% above the first quarter of 1955. There was a steady gain from January through March. Total sales of retail stores in March were \$15.8 billion, up 2% in a month, 4% in a year. Gain in personal consumption expenditures was biggest single factor in rise of gross national product to a new record high in first quarter, at \$399-billion annual rate.

Frozen foods industry has its eye on the lucrative baby-foods market, which accounted for 600 million pounds of product last year. Watch for a campaign to convince mothers that frozen baby foods—already tried experimentally—have superior quality, more vitamins, higher nutrition.

Don't sell a product—sell an idea which requires the use of the product. With this, *William P. Delaney* of General Foods has put his finger on the merchandising philosophy which underlies most of today's successful package design. What does the housewife visualize when she picks a packaged cake mix off the shelf? Not the powdered mix, but the end result so temptingly pictured on the carton. Why have pots and pans become big supermarket impulse items? Because a full-color label pictures wonderful results from their use. This is motivation put to work in packaging.

Advertising payoff depends upon reminder value of store display of the package. This is proved by Coty's six-city test on its "24" lipstick. After consumer ad program was completed, sales remained high wherever package continued to be displayed; without display, sales dropped quickly.

Take note of the dangerous trend in some product fields toward follow-the-leader on package design which tends to make brands look confusingly alike. Observe corrugated cartons for small electrical appliances (mixers, toasters, irons, radios, etc.) which with discount-house sell-yourself merchandising have increasingly become the selling package. Nearly all carry a line drawing of the product, a model number, a selling phrase, a brand name and trademark—and the over-all impression is one of sameness. In an opposite way, soaps and detergents have tried so hard to outdo each other in three-letter names and blatant design that they all make pretty much the same noise. Study your own situation. Take a tack diametrically opposed to the mob if you want to stand out.

Punch-card store, being studied by IGA Stores, would completely eliminate the package as an influence on buyer's selection. Housewife picks up a supply of punch cards at the store, punches them at home to indicate items she wants. At the store she simply feeds the card to a machine and food is delivered—perhaps to her car—on electronic chutes. Hush-hush system will be displayed at IGA's convention this summer.

Set-up boxes continue to gain. Production rose to a new postwar high in 1955. Department of Commerce figures show that 781,153 short tons of set-up boxboard were produced during 1955, an increase of 10% over 1954 and 2.4% over 1953, the previous postwar peak.

Britain proposes an international agreement on the labeling and packaging of pharmaceuticals and medicines. Minute differences in legal requirements in various countries, it was pointed out at the First National

Packaging Conference of the British Institute of Packaging, cause packaging complications and add unnecessarily to the cost of life-giving drugs. Isn't this a project for the United Nations?

Possibility of a combination of wood pulp and plastics to open up "a new world of packaging media" was suggested to the Technical Assn. of the Pulp & Paper Industry by *Norman F. Greenway*, president of Gair. Other hopes: greaseproof, insectproof and rancidity-proof carton stocks; paper packages for battery acids; paper soft-drink containers.

What is research? Here's the definition the H. J. Heinz Co. includes in its recently issued "Statement of Policies and Objectives": "Research is studious inquiry, exhaustive investigation and directed experimentation, having for its aim the revision of accepted conclusions in the light of newly discovered facts."

Polyethylene film consumption in packaging in two years has grown from 25 to 97 million pounds per year and Monsanto predicts the figure will be up to 225 million pounds by 1960. It is estimated that half of the polyethylene packaging film at present is being consumed by produce.

Multiple packages arouse consumer resentment if they force multiple purchase. Rebellion against the recent standard practice of packaging bed sheets only in pairs has forced Cannon to go to a single-sheet package, although textile mills insist it's uneconomic—takes twice as much film, twice as much printing, doubles inventory load and increases retailers' costs by reducing the unit of sale. Intensive consumer education may be necessary in this field and others if multiple packaging is to pay off.

Tubes for foods find their chief difficulty in Americans' propensity for picking up a package and squeezing it. One importer, trying to popularize Swiss preserves in collapsible metal tubes, believes the only answer is to put each tube in a folding carton, like tooth paste.

Polyethylene bags may replace wooden lugs as shipping containers for Washington State cherries. Dept. of Agriculture finds that retention of carbon dioxide by poly film keeps cherries fresh 10 to 14 days at 31 deg. as against 4 to 5 days in paper-lined wooden lugs, making possible shipment East by freight instead of express, at great saving.

Ink's biggest customer is packaging. Slightly more than half of all the printing ink sold in this country is consumed by packaging. By contrast, newspapers account for somewhere between 10 and 15%, books and magazines for 20%.

Stiff competition is shaping up for the boil-it-in-a-bag foods market. Advocates of film laminations like mylar-polyethylene point out the advantage of drawing a vacuum. The foil interests say visibility of product is no advantage, that printing on foil has more appetite appeal.

Premium promotion reaches into the pre-packaged produce field with participation by large shipper packagers and re-packers, on both West and East Coasts, in a cooperative plan to print a self-liquidating premium coupon on bags and wraps. Test packages are said to have drawn strong consumer interest. Participating are D'Arrigo Bros. of Boston; Pure Gold orange distributors of Redlands, Calif.; Merit Packing Co. (carrots) and Tri-Counties Packaging Corp. (celery), Salinas, Calif.

Background

for

packaging



Printed
Polyethylene Bag

Printed
Polyethylene Bag

Printed
Cellophane Bag

close harmony makes more candy sales!



Printed
Glassine Wrapper

Printed Cellophane, Pilefilm,
Polyethylene, Saran, Acetate,
Glassine, Vitafilm, Folia,
Laminations, Folding Cartons,
Bags, Lithographed Displays,
Printed Promotional Material

Milprint ^{*} INC
PACKAGING MATERIALS
LITHOGRAPHY & PRINTING

General Offices, Milwaukee, Wisconsin
Sales Offices in Principal Cities
This insert lithographed by Milprint Inc.
®Reg. U.S. Pat. Off.

with candy packaging by **MILPRINT**

With today's food stores looking toward higher profit items like candy, and with 9 out of 10 candy-buying decisions made right in the store, it's easy to see why you need harmony of design to sell! You'll find it in the way Milprint artists, designers and printing craftsmen blend their talents to produce candy packaging that strikes a responsive chord in your customers.

It's a sure-fire combination of effective, protective, sell-ective packaging, backed by the experience of over fifty years and the widest variety of packaging materials and printing processes available anywhere. To spark sales that are sweet music to any candy manufacturer, call your Milprint man — first!

QUALITY IN . . . AIR OUT with

HORIX *Non-Aerating* FILLING VALVES

For All Liquid Filling

COMPLETE ELIMINATION OF AIR FROM CONTAINER

Illustration shows how the valve port directs flow of product gently down one side of bottle or can, forcing air in container up opposite side and out through the air vent. Air is completely eliminated from the container and a low vacuum is formed in the head space.

LASTING ACCURACY

Fill cuts off exactly at established filling height at any operating speed. Horix filling valves retain their accuracy through long years of use.

CLEAN CONTAINERS

Air-tight sealing eliminates splash and assures an absolutely clean container . . . and containers stay clean and accurately filled without spill due to "one-at-time" removal by discharge turret.

SPEEDS FROM 6 cpm - 700 cpm

You get the same quality of product and same accuracy of fill on every Horix filler, whether built for low or high production speeds.

The flow diagram shows the *unique* Horix method of fill . . . product flows smoothly, naturally, by gravity from the supply tank, through the valve, and into the container. *No one yet has been able to devise a finer, more efficient, lower-unit-cost method for liquid filling.*

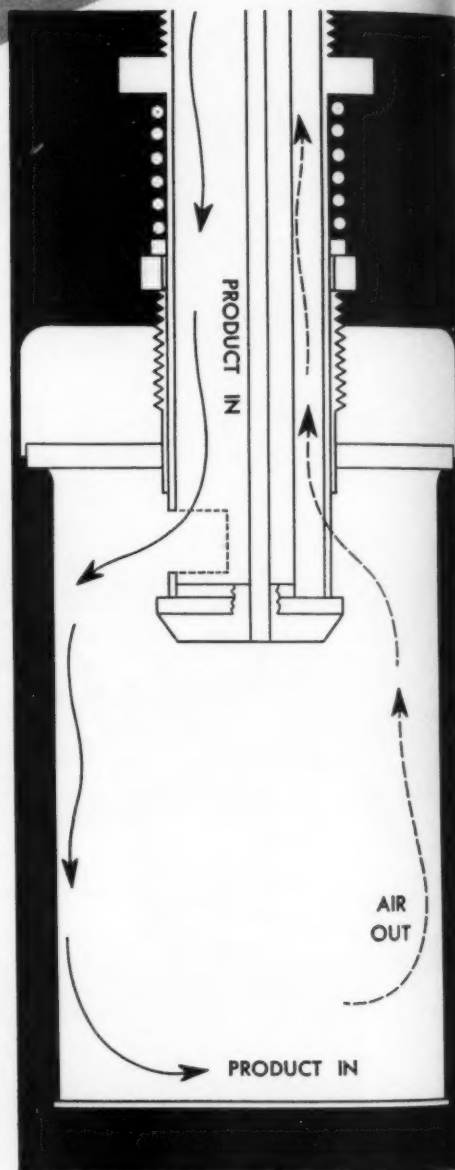
Due to the simple principle of operation, Horix fillers are built with the fewest moving parts. This assures years of trouble free operation under the severest production loads. It also permits quick thorough cleaning with steam or pressure hose.

Feature for feature, dollar for dollar, you just can't do better than a Horix . . . the reason why more and more processors are coming to Horix with their filling problems. Why don't you?

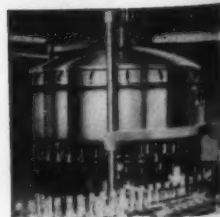
WRITE for Bulletin No. 156-C

HORIX

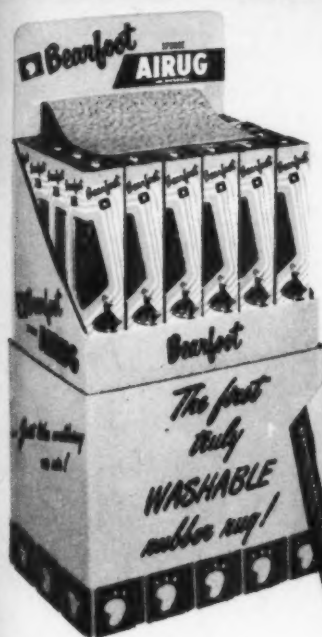
MANUFACTURING CO. PITTSBURGH 4, PA.
FILLERS AND CONVEYORS



Typical Horix Catsup Filler
for 600 bottles per minute.
Fillers available for any
production speed.



PLANNED PACKAGING *moves merchandise*



S

SOARING retail volume is an eye-opener when a practical household product, lifted out of the bulk staple class, finds new outlets and new sales channels by combining an attractive take-home package with a striking display-shipper for floor or counter. Successful design, construction, and board manufacture with complete production facilities — plus unusually broad experience — are included in our complete PLANNED PACKAGING facilities.

THE OHIO BOXBOARD CO.

RITTMAN, OHIO

Manufacturers of paperboard, folding boxes, corrugated and fibre shipping containers, and converted specialties.

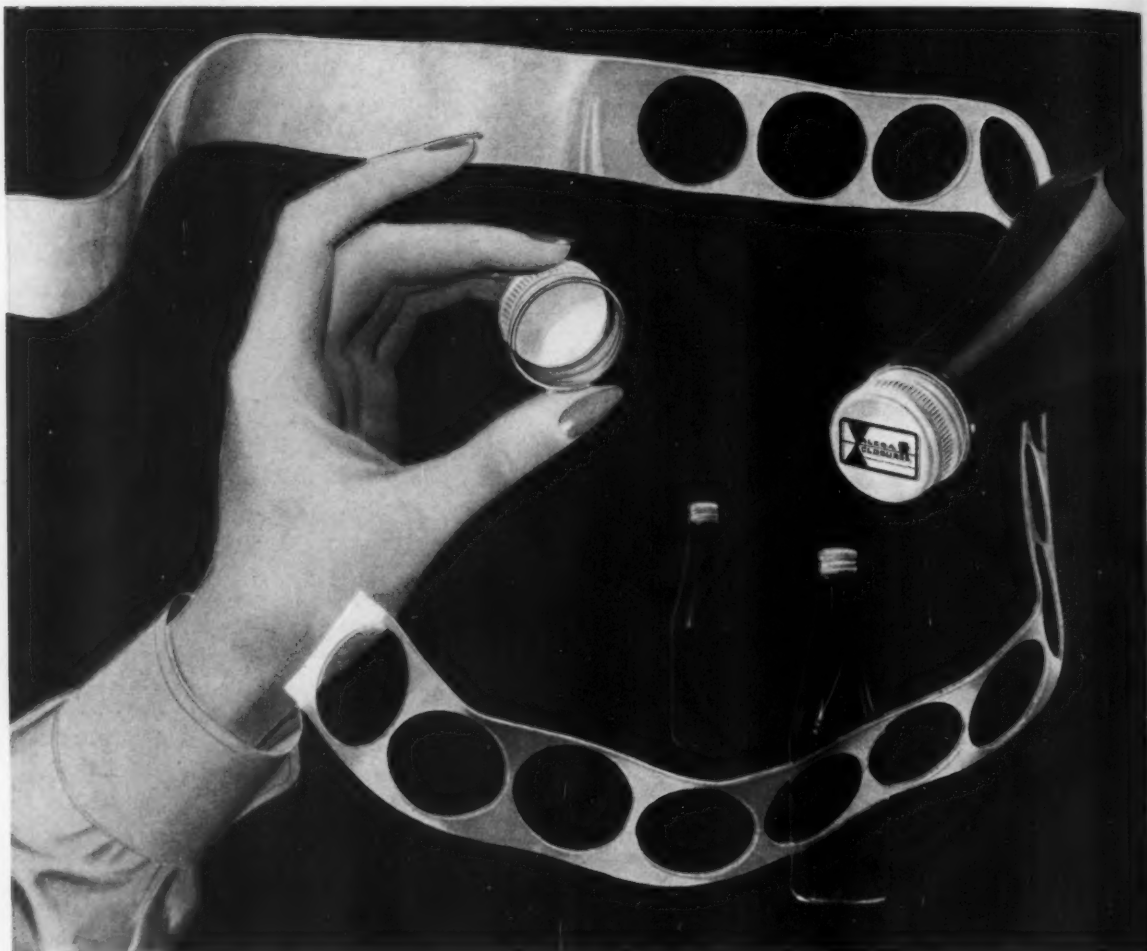
PLANTS

RITTMAN, O.
CUYAHOGA FALLS, OHIO
YOUNGSTOWN, O.
SOUTH BEND, IND.
MIDDLETOWN, O.

CLEVELAND, O.
NORWALK, O.
PITTSBURGH, PA.
LOCKPORT, N. Y.
PLYMOUTH, MICH.

Another new development using

B.F. Goodrich Chemical *raw materials*



Geon liner provides a new twist in bottle closures

SO popular is Alcoa's new HyTop closure that nearly all major brands of catsup today wear this new cap.

Now these bottles are easy to open. The white, clean-looking liner inside the closure, made of Geon polyvinyl materials, is exceptionally smooth. So a dainty twist removes the cap.

Geon is a remarkable plastic raw

material supplied in a wide range of types and formulations to suit specific applications like this. Geon is functional for closures, beautiful for wall coverings, soft and pliable for upholstery, rigid and strong for pipe. Where can you use a material like this for better performance and sales appeal?

For complete information write Dept. DQ-3, B. F. Goodrich Chemi-

cal Company, Rose Building, Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ont.



GEON polyvinyl materials • HYCAR American rubber and latex • GOOD-RITE chemicals and plasticizers • HARMON colors

If it's worth making



It's worth protecting . . . COMPLETELY

Safeguard it with

MEAD
board

It costs no more to provide the extra protection of Mead paperboard. Whatever your packaging requirement, there's a Mead board especially suited to do the job, and with ample safety margin. The Mead Corporation's seven board mills are strategically located where they grow their own strong-fiber pulpwood. Their personnel knows how to make the best. And Mead specialists are trained to adapt the product to every conceivable need. Kraft linerboard and .009 Chestnut semi-chemical corrugating medium, available in all trims and weights, are the basis of dependable product protection. Let our nearest office discuss your needs.

NEW! HH Chestnut Semi-chemical Corrugating Medium withstands constant exposure to high humidity. Odorless. Its extra rigidity is the answer to your requirements for higher top-to-bottom, end-to-end compression in your containers.

Mead Board is a standard product of

THE MEAD CORPORATION

Sold direct by **MEAD BOARD SALES, INC.**, 3347 Madison Road, Cincinnati 9, Ohio

CHICAGO 30, ILLINOIS . . . 6124 N. Milwaukee Avenue

NEWARK 2, NEW JERSEY . . . 10 Commerce Court

DETROIT 35, MICHIGAN . . . 18045 James Couzens Highway

BOSTON 10, MASSACHUSETTS . . . 43 Leon Street

LYNCHBURG 2, VIRGINIA . . . River Road

For All Packaging and Production Needs

Specify **PAMARCO**
ground finished **ROLLS**

-precision made by experts
to the most exacting specifications

EVENFLO
FLEXOGRAPHIC
INKING
ROLLS

no-flex
FLEXOGRAPHIC
PLATE
ROLLS

PAMARCO
ROTO-
GRAVURE
ROLLS

PAMARCO
RUBBER
COVERED
ROLLS

PAMARCO
PLAIN
STEEL
ROLLS



All Pamarco rolls are manufactured to the highest precision standards. Continuous checking during manufacture and a thorough final inspection upon completion guarantee absolute concentricity and adherence to the most detailed specifications.

Engraved surface meters ink automatically, makes time-consuming adjustments unnecessary. Save time, ink and rejects. Also recommended for applying all types of coatings by rotogravure.

Can't flex or whip, assure perfect impressions on every run. Tubular construction reduces weight, tests stronger than solid steel. Ground finish to exact specifications.

Accurate core or base cylinders for rotogravure process reproduction. Recommended for long service in continuous printing production. Each roll carefully inspected prior to shipment.

Cores by Pamarco for rubber covered rolls are supplied for every industrial application. All cores are machined from the finest grade shafting and ground finished by expert mechanics.

Precision ground plain steel rolls by Pamarco can be supplied for every industrial purpose. All sizes and shapes are made by Pamarco to exact specifications including finishing to desired tolerance.

PAMARCO ROLLS ARE AVAILABLE FOR EVERY
PRODUCTION AND PROCESSING PURPOSE INCLUDING
LIGHT DUTY ROLLS ENGRAVED ROLLS
TUBULAR ROLLS HEAVY DUTY ROLLS
CHILL ROLLS WARM SURFACE ROLLS
IDLER ROLLS CHROME PLATED ROLLS
RUBBER COVERED ROLLS

PAPER MACHINERY & RESEARCH, INC.

**Depend on the ROLLS
PRESS BUILDERS USE!**

Most modern presses are equipped at the factory with EVENFLO and No-Flex Rolls. Look for this sign of extra dependability on your new aniline presses. Your press builder will gladly supply data on Evenflo Rolls. Ask for the facts, today!

1014 OAK ST., ROSELLE, N. J.

consult



let experts solve your packaging problems

The Scandia Manufacturing Company recently announced the formation of a new Packaging Laboratory, known as "BERCO". This lab introduces a different approach (Contract Packaging) to problems in market research and the development of new packages.

Berco specializes in problems relating to:

- **BANDING**
- **BUNDLING**
- **MULTIPLE-WRAPPING**
- **HIGH-SPEED WRAPPING**

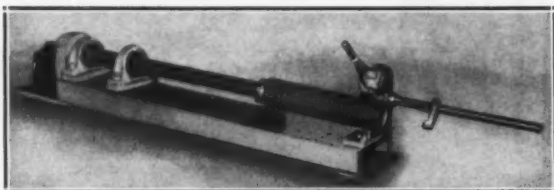


Package Research & Development

BRONANDER ENGINEERING & RESEARCH CORP. • NORTH ARLINGTON, N. J.

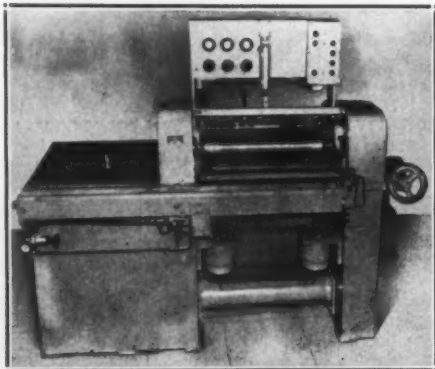
Dusenbery

CONVERTING EQUIPMENT

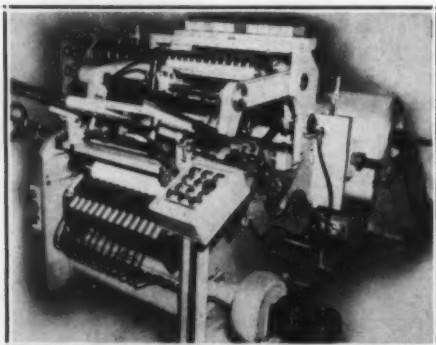


MODEL 765 CORE CUTTER
For 3" I. D. Paper Cores

Simple Operation . . . Accurate Cutting
Dependable . . . Low Cost

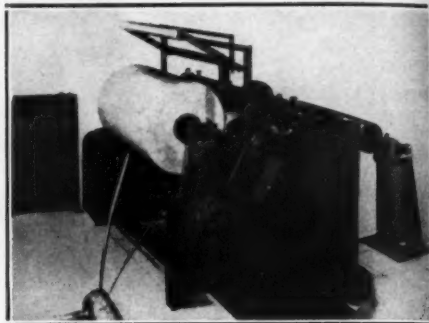


**MODEL 700 HIGH CYCLE
SEMI-AUTOMATIC SLITTER**
For small diameter rolls

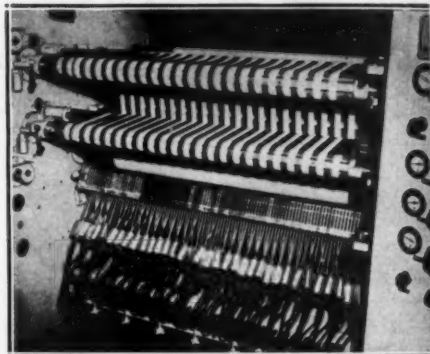


**MODEL 610
AUTOMATIC SHEAR CUT OR SCORE CUT
ROLL SLITTER AND REWINDER**

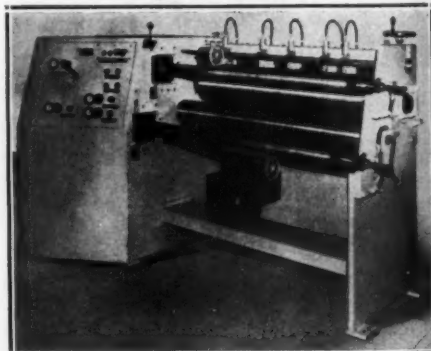
For Cash Register, Teletype and Adding
Machine Rolls, Gummed Tape,
Counter Rolls, etc.



**MODEL 770 SHEAR CUT
BOARD SLITTER AND REWINDER**
For coated and laminated boards from
.020" through .125". Will slit from
1/2" up and rewind to 30" diameter.



**MODEL 760
PRESSURE SENSITIVE TAPE SLITTER**
For Cellophane, Acetate, Mylar,
Paper and Cloth.



**MODEL 730
HEAVY DUTY SCORE CUT SLITTER**
With air-operated knives and air-operated
expanding mandrels. For
paper specialties.

JOHN DUSENBERY CO., INC., 275 GROVE AVE., VERONA, N. J. Tel: CEnter 9-3900

of the
elusive
ove op
ent or
erature



"Good enough to eat!"

Perfect product reproduction with
KVP heat sealing wrappers

This is the age of realism in food packages . . . when products that *look* their best *sell* best.

Look at these foods. You can almost "pick them off the page." They're "real." When the housewife says that . . . you're IN!

Whatever your product . . . meats, poultry, sea foods, fruits, vegetables, macaroni, pies, bread, cookies and baked goods of all kinds . . . look to KVP for:

Top **art work**—top **printing**—
top **mechanical operation**—
top **protection**—top **economy**.

Choice of up to 6 colors letterpress . . . 8 colors gravure.

Send your present wrappers for estimate, or suggested improvement. If you have a new product "in the works," ask KVP artists to help you give it brilliant life and sales appeal.

THE KVP COMPANY, Kalamazoo, Michigan
SPECIALISTS IN FOOD PAPERS FOR PROTECTION AND SALES APPEAL



\$900

AGING



"Good enough to eat!"

KVP heat sealing wrappers

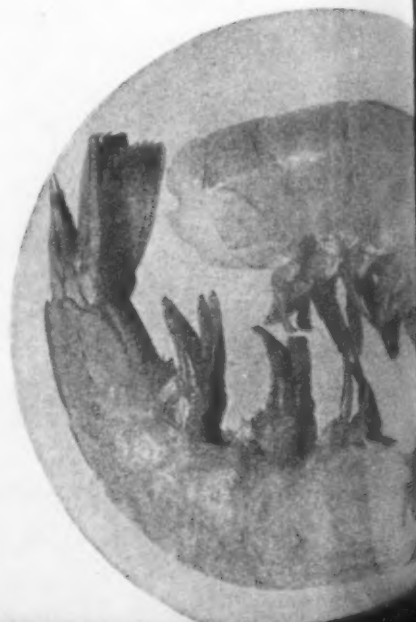
Perfect product reproduction with

look to KVP for:
 Whatever your product . . . meats, poultry, sea foods, fruits, vege-
 tables, macaroni, pies, bread, cookies and baked goods of all kinds . . .
 They're "real". When the housewife says that . . . you're IN!
 Look at these foods. You can almost "pick them off the page."
 This is the age of realism in food packages . . . when products that look

top protection—top economy.
 top mechanical operation—
 top art work—top printing—

You give it brilliant life and sales appeal.
 If you have a new product "in the works", ask KVP artists to help
 Send your present wrappers for estimate, or suggested improvement.
 Choice of up to 6 colors letterpress . . . 8 colors gravure.

SPECIALISTS IN FOOD PAPERS FOR PROTECTION AND SALES APPEAL
THE KVP COMPANY, Kalamazoo, Michigan





Developed by Procter and Gamble
to Protect the Teeth

Tubes by Wheeling to Protect the Product

The introduction of *Crest* toothpaste has attracted national attention and interest. This great new product brings a promise of decay reduction never before possible from a toothpaste.

If you have seen *Crest* toothpaste, you know what a beautiful package the tube is: white as virgin snow, with the brand name in two shades of blue and brilliant red. We at Wheeling are happy to be part of the launching of this new dentifrice.

Crest toothpaste is another fine product packaged in quality-protecting, customer-attracting *Wheeling Tubes*. Why not add *your* products to the list?

• Aluminum, Tin and Lead
Collapsible Tubes

• Molded Caps
for Tubes and Bottles

• Plastic Specialties

WHEELING STAMPING CO.
WHEELING, WEST VIRGINIA

Consult Your Classified 'Phone Directory
for Sales and Service in These Leading Cities:

NEW YORK • BOSTON • PHILADELPHIA • CLEVELAND • CHICAGO
CINCINNATI • ST. LOUIS • MINNEAPOLIS • LOS ANGELES



Finest

from every angle

Round and square face powder boxes

Dusting powder boxes in three diameters

Talcum powder boxes

Guest soap and sachet set-up boxes



Manufacturers of Fine Paper Boxes

E. N. Rowell Co. Inc.

BATAVIA, NEW YORK

PROOF

OF THE FASTEST, MOST ACCURATE Gravure Cylinder Service

**TOP
HONORS!**

Both awards for superiority of printing by means of rotary gravure presses were won by users of SGS cylinders at the 11th annual Folding Carton Competition, sponsored by the Folding Paper Box Association of America, San Francisco, March 1956.

PROOF NO. 1

SGS was first to solve the problem of proofing a set of 4-color process cylinders in its own plant—on any paper, foil, wrapper, or carton stock—for any cylinder size—and for any make of press. SGS 4-color proofs are unequalled in accuracy, register and color—proof of the top quality of SGS gravure cylinders.

PROOF NO. 2

Normal SGS cylinder production time is only 3 weeks! Yet, the quality of our cylinders is equal to, or finer than, any other cylinders made.

PROOF NO. 3

Sales have climbed from \$57,000 in 1947 to approximately \$2,000,000 in 1956. Repeat orders from previous purchasers account for the greatest part of this increase.

PROOF NO. 4

Write for free SGS booklet which lists over 25 categories of gravure printing and more than 1,000 jobs completed on SGS cylinders—proof of satisfied customers everywhere.

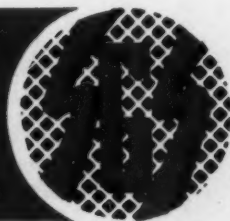
SGS is not a printer and has no financial interest in any printing firm.

Phone Louisville: MEIrose 7-5443

SOUTHERN GRAVURE SERVICE

INCORPORATED

POST OFFICE BOX 1641 • LOUISVILLE 1, KENTUCKY





RIFLES, CHOPSTICKS AND CUTTLEFISH



American servicemen proved their bravery in Korea with rifles...and chopsticks!

Hungry for a change from C-rations and service chow, many GI's worked up the nerve to try unusual Korean foods. They liked what they tasted.

Recognizing a new and untapped market, the Soo Keun Kang family of Hawaii in 1954 began to process and sell Korean food delicacies.

Kang's Foods produces such tasty Oriental specialties as Kim Chee (pickled cabbage), Mu Mal Leng (spiced turnip), Ta Goo (spiced codfish) and Cuttlefish (also spiced, of course), which are related to the octopus.

Paramount's merchandising-minded label and packaging experts tackled Kang's problems and came up with a family of labels em-

phasizing the appeal of the Orient and selling the quality of this unusual line of foods. The distinctive Kang label with real i-appeal® has made it synonymous with fine eating pleasure for lovers of Oriental foods.

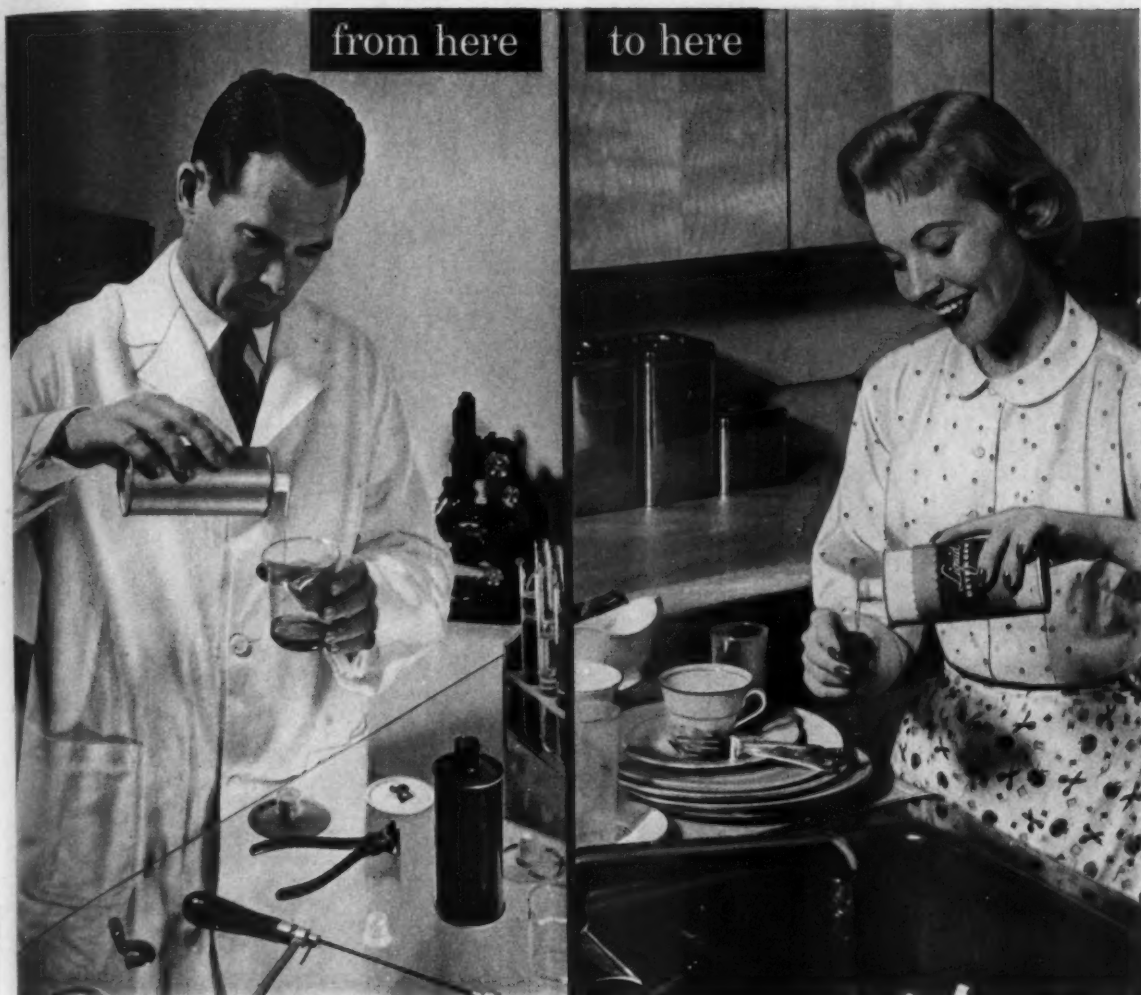
Octopus or snails, chemicals or cosmetics, nuts or bolts—if you want more sales, contact Paramount. Get complete information on a free label design service that will give your packages more buy-appeal, more i-appeal.®

For the right labels to do your job right,
write to—
Paramount
i-APPEAL®

PARAMOUNT PAPER PRODUCTS CO.

4401 North 23rd Street, Omaha 10, Nebr.
In Canada, 218 Front Street East, Toronto, Ontario

How **CANCO** research engineers helped move a new liquid detergent



*From the manufacturer's laboratory to the consumer's kitchen can take a long time.
Here's how Canco hurried the whole process . . . with a brand new kind of can.*

SOMETIMES consumer acceptance of a new product needs the aid of something new in packaging too. The 100% dripless container, designed by Canco for a new liquid detergent, is a good example.

The new nozzle wouldn't, couldn't drip. The lightweight construction meant easier handling. The side-seam Canco developed permitted full decoration all the way around the can. And of course, the can was unbreakable.

Women liked the detergent and the container it came in and, above all, they liked the dripless feature. Other manufacturers soon recognized that this dripless can is suitable

for almost any liquid product—salad oil, syrup, turpentine, liquid starch, ammonia, and dozens of others.

The dripless can is another Canco "first". One of many. And if you have a packaging problem, come to Canco with it. The next Canco "first" could be for you.



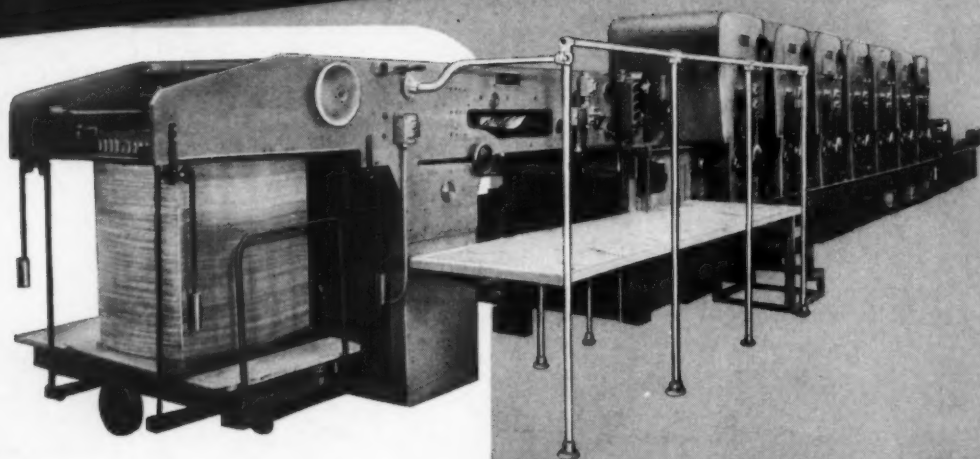
*"Can do!" . . . that's the spirit of
American Can Company*

NEW YORK • CHICAGO • SAN FRANCISCO

NOW!

A ROTOGRAVURE PRESS

that Delivers Sheets **1 1/2** Times Faster!



NOW—for the first time—you can take advantage of the high speed of modern rotogravure presses for label and wrapper printing. Improved Champlain Sheet Delivery—operating inline with a Champlain Rotogravure Press—delivers square-cut sheets with 1/64" accuracy 1 1/2 TIMES FASTER THAN ANY OTHER STANDARD SHEETER!

Standard Sheet Size	Glassine & Paper Backed Foil		Label Paper		Heavy Paper & Cardboard		Max Width	Max Length	Min Length
	St. Per Min.	Sheets Per Hr.	St. Per Min.	Sheets Per Hr.	St. Per Min.	Sheets Per Hr.			
14 1/2" x 22"	400	1,600	400	1,600	400	1,600	14 1/2"	22"	14 1/2"
14 1/2" x 24"	400	1,600	400	1,600	400	1,600	14 1/2"	24"	14 1/2"
14 1/2" x 26"	400	1,600	400	1,600	400	1,600	14 1/2"	26"	14 1/2"
14 1/2" x 28"	400	1,600	400	1,600	400	1,600	14 1/2"	28"	14 1/2"
14 1/2" x 30"	400	1,600	400	1,600	400	1,600	14 1/2"	30"	14 1/2"
14 1/2" x 32"	400	1,600	400	1,600	400	1,600	14 1/2"	32"	14 1/2"
14 1/2" x 34"	400	1,600	400	1,600	400	1,600	14 1/2"	34"	14 1/2"
14 1/2" x 36"	400	1,600	400	1,600	400	1,600	14 1/2"	36"	14 1/2"
14 1/2" x 38"	400	1,600	400	1,600	400	1,600	14 1/2"	38"	14 1/2"
14 1/2" x 40"	400	1,600	400	1,600	400	1,600	14 1/2"	40"	14 1/2"

ADVANTAGES?

Here are just a few:

For Rotogravure: high-speed precision-register printing on practically *any* stock in multiple colors—ideal for meeting the increasing demand for high-quality, high quantity wraps and labels for packaged products.

For Improved Sheet Delivery: greater production with inline economy.

PLUS

- **HIGH SPEED**... from 8,500 to 12,500* sheets per hour—chart at left shows full range.
- **ACCURACY**... cuts consistently square sheets to 1/64" or finer accuracy from any stock—any speed.
- **SHEET PROTECTION**... exclusive individual sheet handling insures accurate jogging—undamaged front edges.
- **JAM-PROOF**... *separate* handling of each sheet with continuous individual movements acts as self-clearing mechanism—DANGER OF TEARING, FOLDING, BUCKLING, OR COCKING IS PRACTICALLY ELIMINATED.
- **NO WASTE TRIM**... easily adjustable to *any* sheet-width or length within the range of the press. This feature—plus consistent accuracy—produces sheets ready for the ream cutter.
- **VERSATILITY**... handles paper, board, foil, and most specialty stocks with equal ease.

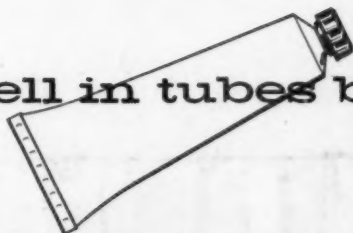
Champlain & C



Champlain manufactures a complete line of rotogravure, anilino, rotary letterpress and allied equipment for packaging and specialty printing.

Write today for catalog of Champlain press equipment and full information on Champlain Improved Sheet Delivery. Champlain Company, Inc., 68 Llewellyn Avenue, Bloomfield, N. J. Chicago Office: 520 N. Michigan Avenue, Chicago 11, Ill.

pack and sell in tubes by WIRZ



IDEAS THAT INDICATE THE GROWING LIST OF PRODUCTS SUCCESSFULLY PACKAGED FOR GREATER SALES IN FOLD-UP METAL TUBES BY WIRZ.

FRESHNESS ASSURED



Cream deodorant and anti-perspirant stays *fresher, longer* . . . is protected against drying out in the modern, airtight container—a Wirz tube.



TRAVELLER'S AID

Kip soothing antiseptic for minor burns, cuts, goes with you to the beach or mountains. Clean, easy to apply, Kip comes in tubes by Wirz.



LASTING

PROTECTION Leakproof fold-up metal tube by Wirz protects versatile liquid rubber cement . . . stores easily for handy use in home or office.

Wirz specializes in packaging problems. Write us today about your needs.



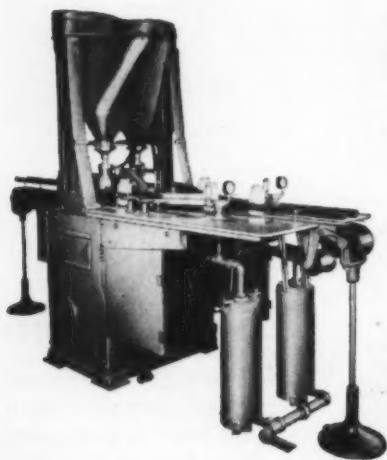
4TH & COLE STREETS
BRANCH PLANT: CARROLLTON, KENTUCKY

COLLAPSIBLE METAL TUBES AND PLASTIC MOLDING
ALSO RIGID CANS AND IMPACT EXTRUSIONS BY AMERICAN EXTRUSION CORPORATION, DIVISION OF A. H. WIRZ, INC.

New York 17, N.Y.	Chicago 4, Ill.	Memphis 2, Tenn.	Los Angeles 48, Calif.	Havana, Cuba	Export Div.—1010 Schaff Bldg
50 E. 42nd St.	80 E. Jackson Blvd.	Wurzburg Bros.	435 S. La Cienega Blvd.	Roberto Ortiz & Son	Philadelphia 2, Pennsylvania

4 ways to protect your profits in packaging

with accurate dust-free filling

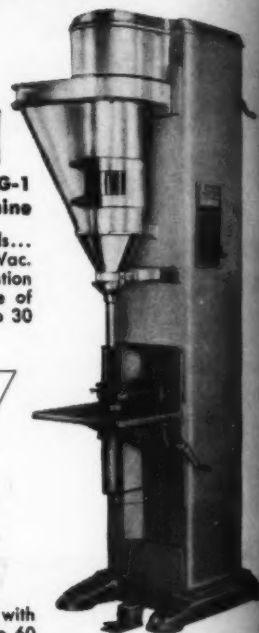


1 Stokes & Smith Model EG-1 Universal Auger Filling Machine

Semi-automatic operation with any of four filling methods... volumetric, pressure packing, gross weighing, or Auger-Vac. 40% fewer working parts are all located above filling station for clean operation. Will accommodate a wide range of package sizes from 2 grams to 10 lbs. at speeds up to 30 units per minute.

Ideal for Dry Milk Solids

Stokes & Smith Auger-Vac assures clean, accurate fill with minimum dusting loss of whole or non-fat dry milk solids, hot chocolate powder, cocoa, instant coffee, etc. in cans or jars.

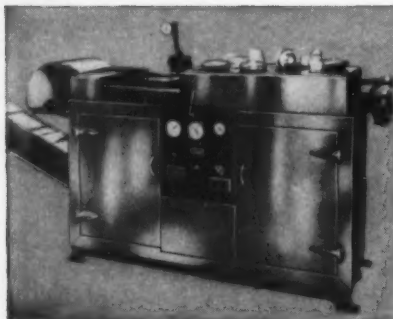


2

Stokes & Smith Model HG-84 Automatic Duplex Filling Machine

Two filling stations operate automatically by auger feed with precision cam-control for accurate filling. Speeds up to 60 units per minute. Also supplied with Auger-Vac equipment for fast, dustless filling of non-fat dry milk solids and other hard-to-pack powdered products.

with fast, flexible packaging



3 Stokes & Smith Model "BS" STOKESWRAP Machine

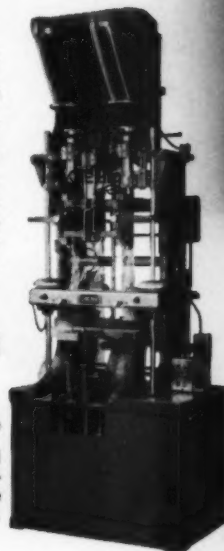
From roll stock, automatically forms, accurately fills a wide range of powdered or granular products and heat-seals either pillow-type or four-seal package. Handles a wide variety of packaging films at speeds up to 120 units per minute. Ask about STOKESWRAP for non-fat dry milk solids, dry cream, etc.

with contour wrapping

4 Stokes & Smith STRETCHRAP Wrapping Machine

Cheeses, meats and other odd-shaped products are wrapped at speeds of 12 or 15 units a minute in clear, sanitary, airtight Pliofilm.* Reduces spoiling, handling damage, moisture loss. Tight wrinkle-free "skin" makes sales-appealing package.

*T.M. The Goodyear Tire and Rubber Co., Akron, Ohio



STOKES & SMITH CO.

4904 - 13 SUMMERDALE AVENUE, PHILADELPHIA 24, PA.

Pacific Coast: SIMPLEX PACKAGING MACHINERY, INC., 534-23rd AVE., OAKLAND 6, CALIF.



SUBSIDIARY OF FOOD MACHINERY AND CHEMICAL CORPORATION

Max German's



U. S. INSPECTED AND PASSED BY DEPARTMENT OF AGRICULTURE EST. 919

SLICED

COMBO LOAF

INGREDIENTS: BEEF, PORK, PASTEURIZED PROCESS CHEESE, WATER, SWEET PEPPERS, PORK FAT, SALT, FLAVORINGS, GELATIN, DEXTROSE, SODIUM NITRITE, SODIUM NITRATE.

KEEP REFRIGERATED

PRICE PER POUND	NET WEIGHT	THIS PACKAGE
	8 oz.	¢

MAX GERMAN ST. LOUIS 13, MISSOURI

ONE SHOP STOPPERS

When attention-getting labels are on the agenda, it's one-stop-shopping with Ever Ready, whether you need heat-seal labels like the one above, Red-E-Stik pressure sensitive labels, or any other type you can name—Ever Ready makes them! But labels that cause customers to reach for your product are Ever Ready's main specialty, and we produce more than 15,000,000 a day, all designed to lift a product out of a highly competitive group and give it the pay-off push across the counter!

Ever Ready's top-notch designers and technicians approach your label problem by studying your advertising, sales and promotional

program. They know your label must integrate perfectly with *all* your efforts, and really express the individual character of your product. Subtle salesmanship, where it counts most, is a basic ingredient of each label designed and produced by Ever Ready.

Let's have a go at *your* label. More than 60,000 satisfied customers have found that there's something *special* about the services offered by Ever Ready.

WITHOUT OBLIGATION, we'd like to send you ☐ The Story of 8 Important Red-E-Stik Pressure Sensitive Applications ☐ The Ever Ready Label Idea Kit ☐ Samples.



EVER READY LABEL

10 EAST 49TH STREET, NEW YORK 17, NEW YORK

Other offices in Chicago and Belleville, N. J.



News from Hamilton!

**Over 600 can ends a minute
processed by new high-speed
Compound Liner and Dryer
... automatically**

Hamilton brings you another modern, high-speed unit for your can-making line . . . the all-new 501 Compound Liner and Dryer. Fully automatic, it can do the work of two single nozzle machines . . . processing over 600 lined and dried can ends a minute ($2\frac{1}{8}$ " to $4\frac{1}{4}$ " diameters). The 501, using either solvent or water base compounds, deposits a precisely measured amount of lining compound into the lid's curled edge channel.

These advanced Hamilton features assure you high output, low-cost operation and minimum maintenance:

- Explosion-proof electrics. Vari-pitch sheaves provided to vary speeds to suit production needs.
- Conveniently located hand wheels and clutch control levers for easy operation.
- Simple, compactly designed upper and lower liner units. Cam timing adjustable from the bottom of the machine without disassembling the unit.
- Feed stack controlled by high and low limit electric micro switches.
- Suction blower mounted on top of dryer, vents fumes from solvent base compound. Where water base is used a gas heating unit is provided with self-contained exhaust unit.
- Bottom-fed discharge stack permits removal of ends from the top, eliminates interference with machine operation.

The 501 Compound Liner & Dryer is the perfect answer for your most exacting production needs. Send for our new 501 Bulletin. Call in Hamilton Can Machinery Specialists for help with your can line problems. Address Dept. 7575, Hamilton Division, BLH Corporation, Hamilton, Ohio.



**HAMILTON DIVISION
BALDWIN-LIMA-HAMILTON**

DIVISIONS: Austin-Western • Eddystone
• Electronics & Instrumentation • Lima •
Hamilton • Loewy-Hydropress • Madsen
• Pelton • Standard Steel Works

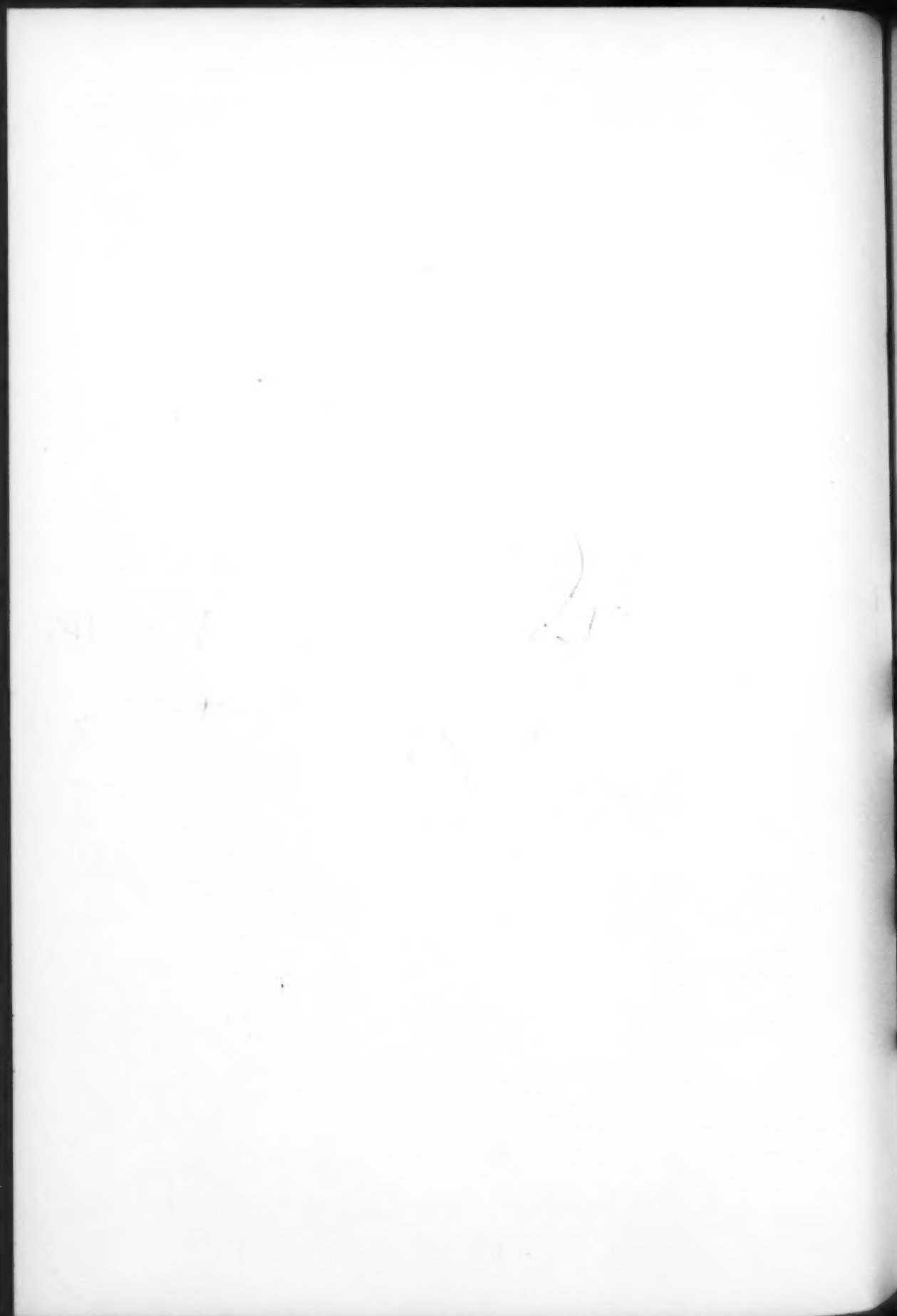
Plan
Now

Use Cochran Foil



Cochran  **COMPANY**
Incorporated

Plain Foils ★ Colored, Embossed
and Laminated Foils
Louisville 10, Ky.





COLOR...

your sales catalyst by

Sinclair and Valentine Co.
PRINTING INKS FOR ALL PURPOSES



COLOR...

your sales catalyst by



Color is the essential ingredient in effective selling... the catalyst that makes an exciting difference in every printed piece. And nothing provides impelling, sales-winning color like dynamic SV ink! Whether it's film, foil, glassine or the finest papers—SV has the ink that will provide the distinguishing touch. Outstanding SV inks are the result of years of painstaking research and experience in developing the very best in printing inks for every purpose. You can depend on SV to provide you with the superior color you need to give your jobs solid sales appeal!

1946 1956
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SERVING THE GRAPHIC ARTS THROUGH RESEARCH

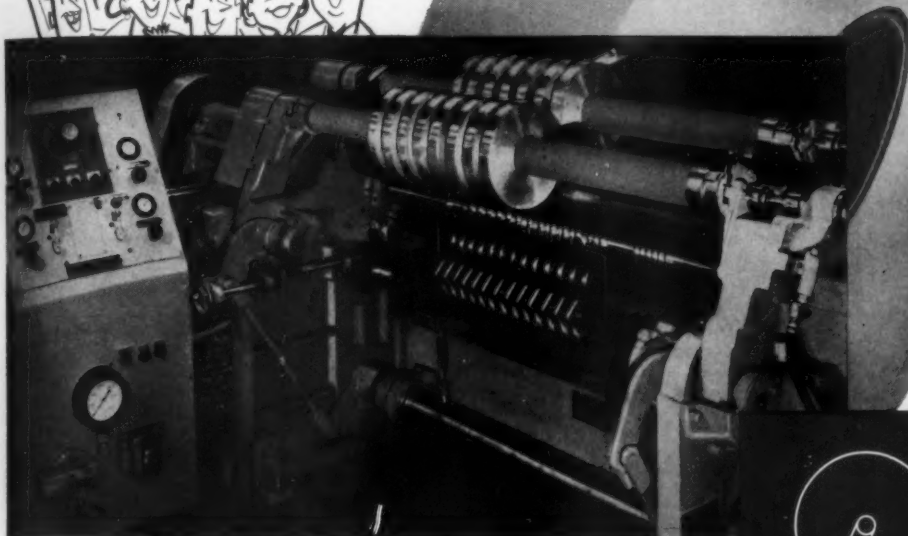
Sinclair and Valentine Co.

Main Office and Factory, 611 West 129th St., New York 27, N. Y.

OVER 35 BRANCHES PROVIDE SERVICE FROM COAST TO COAST

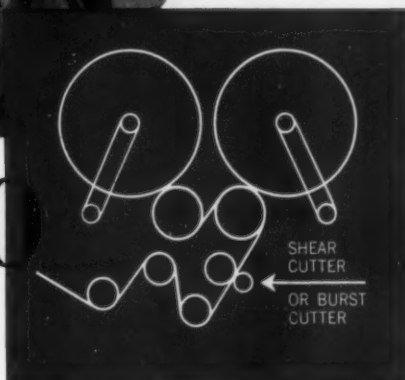


Can you meet the big demand for new FOLL wraps?



YES...with the new 500

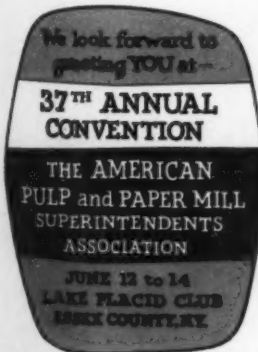
The new **Camachine 500** is ideally suited for slitting and winding hard and soft aluminum foil, or foils laminated to paper or plastics. The sensitivity and accuracy of both the unwind and rewind controls make it possible to produce top quality, narrow width rolls up to 20" in diameter at speeds up to 2000 feet per minute.*



The **500** is available in other models equipped, as shown in the above threading diagram, with individual rewind drums and individual rewind drives. This arrangement permits flexibility when separating two ply foil at high speeds and gives complete assurance of perfect rolls. 36" diameter rewind capacity is available in heavier models for both the separating operation and for single ply webs.

Here, for the wind-up end of your production line, is a machine that will protect profits on your entire plant operation. The 500 is easy to operate, exceptionally fast, and has earned a reputation for dependable, top quality production. Call, or write to Cameron for technical information.

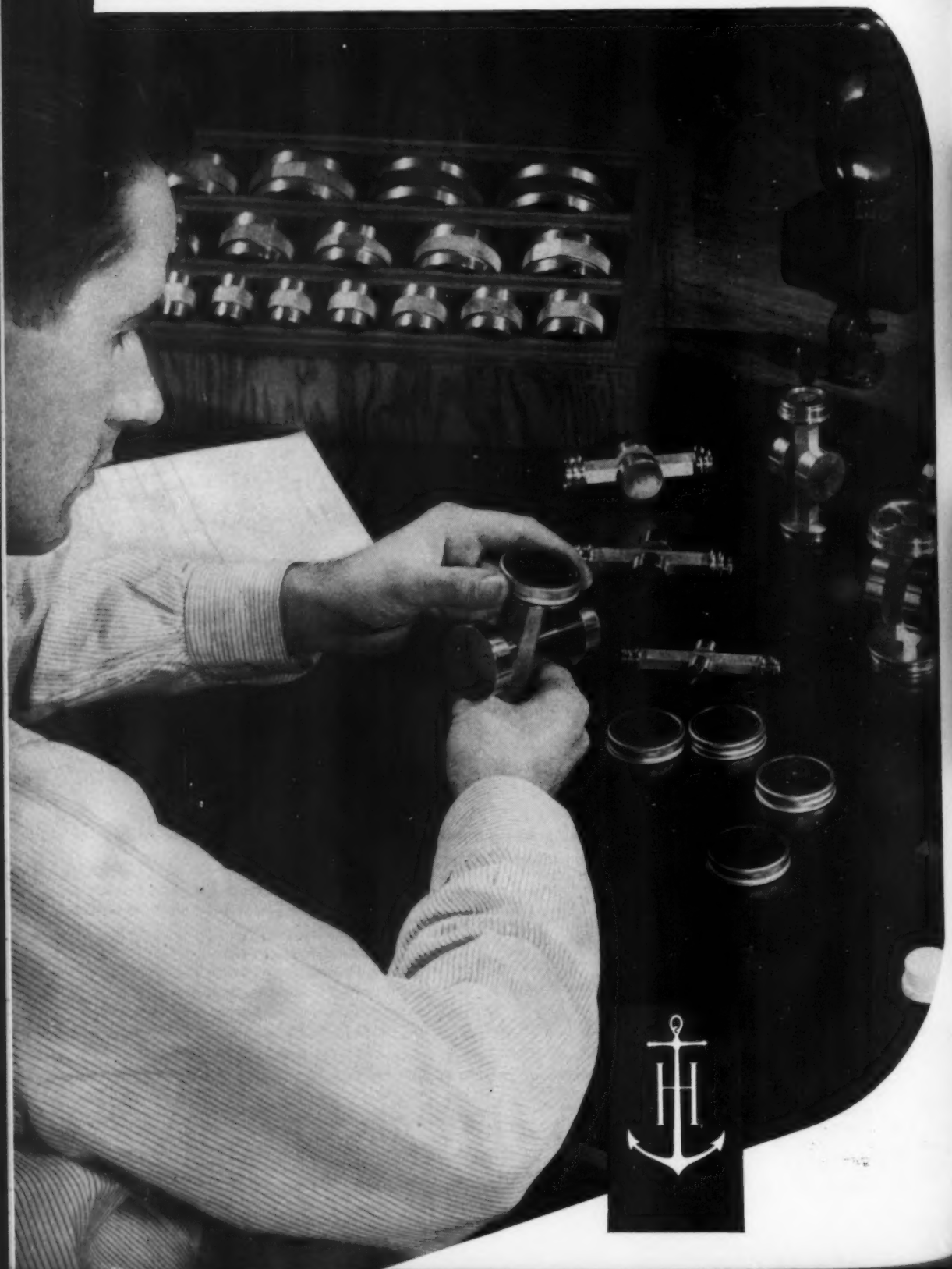
*Speed depends on characteristics of material, strip width and roll diameter.



IT PAYS TO WIND UP WITH A **Camachine**

CAMERON MACHINE COMPANY • 61 Poplar Street • Brooklyn 1, N. Y.

CONTROL IS A



S ALL-IMPORTANT *with Anchor Hocking!*



Regardless of what you pack Anchor Hocking makes an Anchorglass container in a style, size and color to most attractively, efficiently and economically package it. And regardless of how you pack it—hot or cold—with or without vacuum, sterilized or processed, there's an Anchor cap and Anchor sealing machine to completely satisfy your diverse and specialized requirements.



THE controls applied throughout your production and packaging operations are all-important to you. By the same token, the manufacturing controls employed by Anchor Hocking are very important to you, also.

Anchor Hocking exercises literally hundreds of exacting controls, tests and checks daily in the manufacture of its glass containers and closures. From the selection of all raw materials used to the final inspection, every

operation is under meticulous control.

And all of this control, involving highly trained chemists, bacteriologists, engineers, other technicians and personnel, is done but for one reason. And that is, to provide you with uniform, high quality, dependable Anchorglass® containers and Anchor® screw, lug, vacuum, metal and molded closures that will give you high-speed, dependable production and protection.

ANCHOR HOCKING

GLASS CORPORATION Lancaster, Ohio

CARTONS IN ACTION!

for example:

Multiple-unit "handy-packs" are creating new volume sales opportunities in the food, drug and allied fields.



Ideas that create new marketing concepts

Carton ideas that will be the talk of the trade tomorrow are on Gaylord drawing boards today. They'll play a vital part in solving sales problems and stimulating merchandising campaigns. Furthermore, you'll find that these new Gaylord carton ideas are as practical as they are ingenious... engineered for fast, efficient packing, reliable protection and long-lasting good looks.

For the freshest carton ideas in your field... and for assistance with your specific problems... call your nearby Gaylord sales office today.



GAYLORD CONTAINER CORPORATION • ST. LOUIS

DIVISION OF CROWN ZELLERBACH CORPORATION

FOLDING CARTONS • CORRUGATED AND SOLID FIBRE BOXES • KRAFT BAGS AND SACKS • KRAFT PAPER AND SPECIALTIES

SINCE

1889

FOIL

FOIL

FOIL

FOIL

TIN

LEAD

COMPOSITION TIN and LEAD

PURE ALUMINUM

IS ALL WE MAKE

... by the oldest EXCLUSIVE
foil manufacturer in America

What are YOUR Needs?



JOHNSTON FOIL

MANUFACTURING CO.

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633 SOUTH LA BREA AVE.
7446 VINE STREET
3415 WESTMINSTER
6008-6298 S. BROADWAY

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JCY 791-U
LA 1855-U
CI 225
SL 369

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WRITER
NUMBERS

Le
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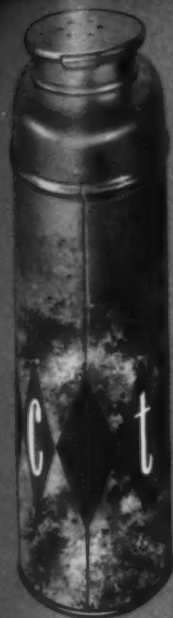
W

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or

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Let Continental's master lithography give your product "360° Glamour"

See for yourself. Your product looks colorful, inviting, from any angle in a Continental can. It has no "front" and it has no "back." Every square inch of outer surface is free for lithography by our master craftsmen. Your designers are not limited to mere spot decoration. And, if your message includes lengthy directions or mandatory information, it can be printed right on the can. No need for extra tags, wrappings or labels. In addition, protective, convenient Continental cans continue to please—even after weeks or months of steady use. May we help you to a package with "360 degree Glamour"?

CONTINENTAL © CAN COMPANY

Eastern Division: 100 E. 42nd St., New York 17
 Central Division: 135 So. La Salle St., Chicago 3
 Pacific Division: Russ Building, San Francisco 4



X-Ray photo of Special K cereal box



Inside Story on Special K Protective Packaging



Kellogg's new protein potent Special K cereal has a "waxtite" inner bag that guards its oven-fresh flavor. This bag is fabricated from Rhinelander glassine waxed by the Kellogg Company. It's there to keep moisture vapor from reaching the cereal. The bag insures the just-right crispness that must be nicely balanced to prevent rancidity development and excessive dryness.

Waxed glassine performs this job successfully and inexpensively. Moreover, it has excellent folding qualities which enable the package to be re-closed after part of the contents has been removed.

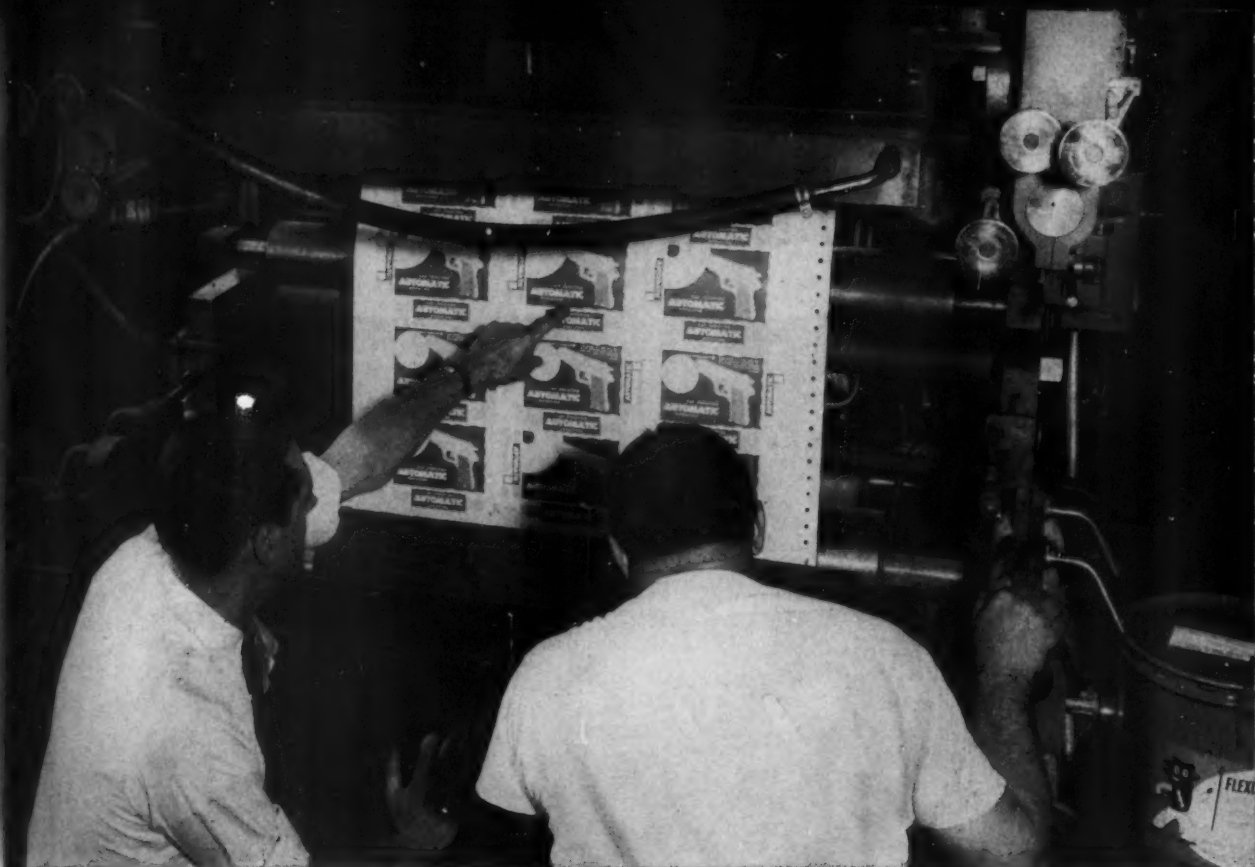
These and other properties, such as resistance to grease, shortening and oils, make Rhinelander glassine paper an ideal protective medium in packaging many perishable food products.

Write for full information and samples—stating your packaging application.



RHINELANDER PAPER

Rhineland Paper Company • Rhinelander, Wisconsin



Choose a BBD ink for better printing results on any paper or boxboard

BBD FLEXOGRAPHIC and GRAVURE INKS for PAPER and BOARD

HYDROTONE—Water-type matte-finish ink for flexographic or gravure printing of tissue and other absorbent papers, carton and cup stock. Withstands corrugation.

VELVATEX—Alcohol-soluble matte-finish ink for flexographic or gravure printing of featherweight tissue, other papers and paperboards. Withstands corrugation.

FLEXOKRAFT—Pigment-dye flexographic ink for kraft papers, linerboard, boxboard, glassine, etc.

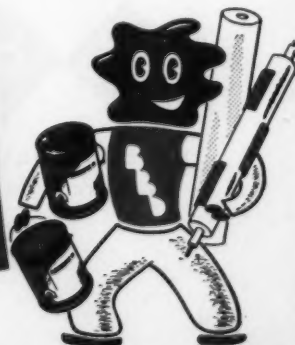
EXCELLOPAKE—100% pigmented flexographic ink for glossy, brilliant, opaque effects on kraft, sulphite, bond papers, glassine, boxboard.

You can turn out top-quality printing on boxboard or paper—enjoy maximum press efficiency too—when you use a time-tested, time-proved BBD ink in the fountain.

In the box to the left you can see the variety of BBD inks for flexographic and gravure printing on paper and paperboard stocks. They include pigment, dyestuff and pigment-dye inks... to print with high-gloss, regular or soft-matte finishes. Whether you print folding cartons, box coverings, linerboard, counter roll wrappings, shopping bags, garment bags, grocer sacks, paper cups, milk containers or other similar converted products BBD can supply an ink that is just right for your needs.

BBD inks are noted for their color strength... their ability to print clean and sharp... their level opaque coverage... their extremely fine grind... in fact, for every quality that affects their printability and end-use suitability. And, because they are quality-controlled from start to finish, you can depend on them for consistently good performance... job after job.

For more information about any of these BBD Inks—and the service of a "shirt-sleeved" BBD field technician—contact our nearest office or write direct to **Bensing Bros. and Deeney**, 3301 Hunting Park Ave., Philadelphia 29, Pa.



THE JOHN DALE GROUP for quality and service



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It is the personnel that counts

Our New York sales office has moved to the eighteenth floor of 415 Madison Avenue, and you are cordially invited to visit us.

This move, as well as the opening of many new Hazel-Atlas sales offices, and modernization of old ones, is part of our continuing program for better service.

The physical aspects of these offices, however, are secondary.

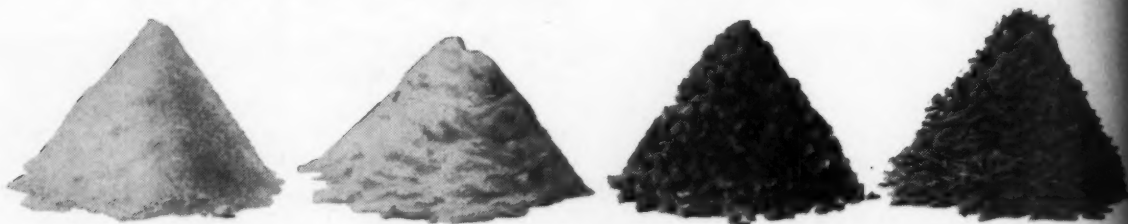
It is the personnel that counts

Each representative in a Hazel-Atlas sales office is a factory trained glass packaging expert. He is there to help you on your problems from the production line to the consumer. He is given these new surroundings that he may be of greater help to you than ever.



HAZEL-ATLAS GLASS COMPANY
WHEELING, WEST VIRGINIA

take a powder...



any powder

put it in an I-L Powder-Pack and you have a profitable sales item every time.

Why?

Because I-L Powder-Packs are saleable—convenient—protective and economical.

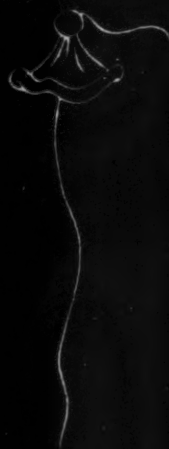
For speed of delivery—for real, overall economy there is no finer powder package in the world. Complete and certain protection—instant and favorable sales reaction can be provided your powder products... and with less waste, too.

I-L Powder-Packs can be yours in single units, in tandem packs or in strips. You can have your powder packaged in small or large Powder-Packs—up to 6" square... in rigidly controlled volumes ranging from a fraction of an ounce to over 2 ounces. You can print your sales message front and back—in colors of your choice. You can have your Powder-Packs stamped with your batch number, code number or expiration date, in any color. And, you can have a Powder-Pack that is designed and engineered by Ivers-Lee exclusively for your product.



Creators of a thousand and one different types of Unit-Packages for tablets, capsules, triturates, powders, creams and unusual products during 34 years of Packaging Service.

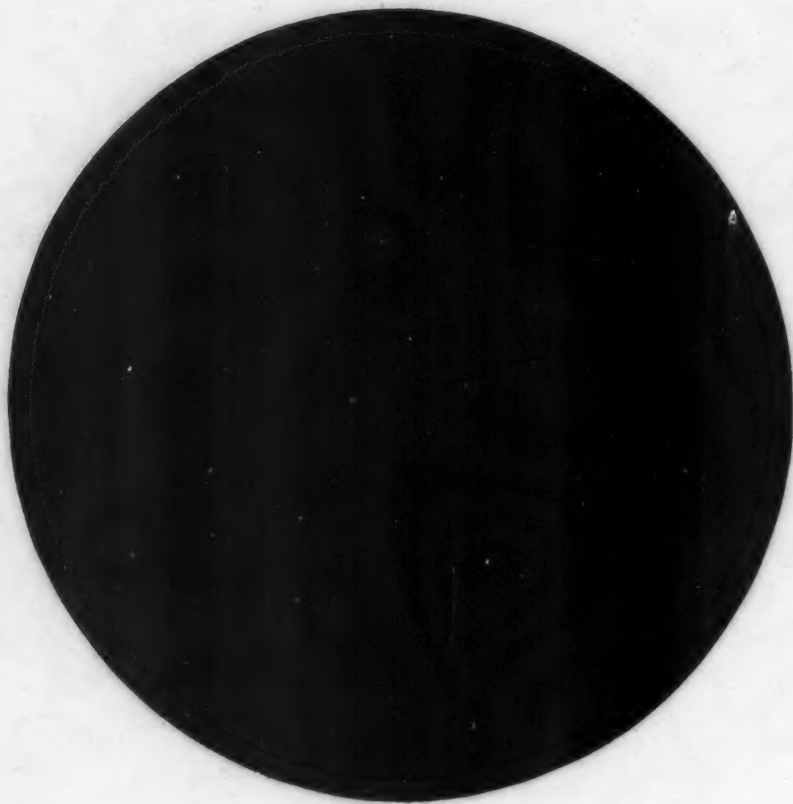
fisher's foils



keep sales soaring!

FISHER'S FOILS LIMITED WEMBLEY MIDDLESEX ENGLAND
TELEPHONE WEMBLEY 6011 CABLES & GRAMS LIOFNI WEMBLEY (ABC CODE 6TH EDN)

allot etis dani



Wm. H. & Co. N.Y.



★ *A Quality Product of FISHER'S FOILS of LONDON, ENGLAND.*

Throughout all stages of manufacture, every roll of foil made by Fisher's Foils of England is *automatically controlled* for gauge consistency by the latest beam gauge. Send today for wide range of samples or ask our representative to call.

**fisher's
foils**



Which square looks whiter?

The one on the left does, but that's a common optical illusion, as both have the same degree of whiteness.

DON'T BE FOOLED BY THIS MATTER OF WHITENESS IN PAPER

Most plain white papers look white when viewed by themselves. But put a plain white paper beside one treated with CALCOFLUOR® WHITE PMS CONC. and *compare!* You'll see a very sharp difference — and it's no optical illusion. Your customers will see it, too!

In packaging, whiteness *sells!* It sparks the printed message, heightens display value, gives your packages a

head-and-shoulders advantage over competitors. That's why it will pay you to specify the whiter-than-white papers containing CALCOFLUOR WHITE PMS CONC.

See the difference! Mail the coupon for folder that dramatically illustrates the superior printing effects achieved with this whiter-than-white paper. See both types . . . side by side!

*Trademark



AMERICAN CYANAMID COMPANY

DYES DEPARTMENT

Bound Brook, New Jersey

New York • Chicago • Boston • Philadelphia • Charlotte
Providence • Atlanta • Los Angeles • Portland, Oregon

North American Cyanamid Limited, Dyes Department
Montreal and Toronto



Symbol for Quality Dyes

AMERICAN CYANAMID COMPANY
Dyes Department, Bound Brook, N. J.

☐ Please send me comparison folder on CALCOFLUOR-whitened paper.

NAME _____ POSITION _____

COMPANY _____

STREET _____

CITY _____ ZONE _____ STATE _____



That the breadwrap may be a better breadwinner

The press that prints the wrap does much to win the bread sales.

And there is only one way this company can be sure that a press will do the clean printing job that Kidder Presses have a reputation for producing. It is a thorough test of the expertly designed Kidder Press.

Here you see an eight-color letterpress on the erecting floor. The important hydraulic lines are being assembled by workmen specially skilled in the work. So it is with every part and device on the press.

It is then completely disassembled, carefully packed for shipment and is later assembled by a qualified Kidder erector.

This is the best protection in the world of printing for the Kidder customer and the Kidder Press reputation.



Kidder

Letterpress, Flexprinter® and Gravure Presses, Slitters and Rewinders

KIDDER PRESS CO., INC., DOVER, NEW HAMPSHIRE

in the f

producing an
excellent grade of

**BLEACHED
SULPHATE
BOARD**

in a modern mill
at St. Marys, Ga.



Gilman Paper Company

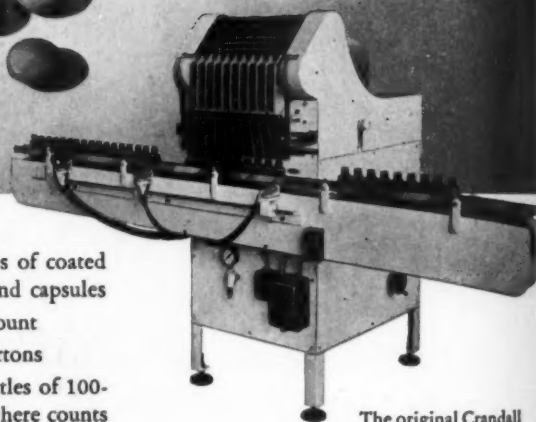
630 FIFTH AVE., NEW YORK 20, N. Y. DAILY NEWS BLDG. CHICAGO 6, ILL.

The Fast Automatic Crandall Counter is IDEAL for Producers of Tablets, Pills or Capsules



Here's Why!

- The Crandall . . .
1. handles practically all types of coated or uncoated tablets, pills and capsules
 2. can be equipped for any count
 3. handles bottles, cans or cartons
 4. runs at speeds up to 60 bottles of 100-count per minute — faster where counts are lower
 5. can be equipped for automatic or semi-automatic operation



The original Crandall Tablet Counting Machine is manufactured only by **US**.

. . . and here is an important added feature —

The Crandall can handle several different products simultaneously. By dividing the hopper, the Crandall can count several products at the same time. Thus, if you are making small volumes of a variety of products, you can set up the Crandall to suit your exact requirements with a minimum of effort.

Full details are yours for the asking. Write today.

U. S. AUTOMATIC BOX MACHINERY CO., INC.

Owning and Operating NATIONAL PACKAGING MACHINERY CO. • CARTONING MACHINERY CORP.

122 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: New York ★ Chicago



Net and Gross Weighing
Package Forming and Filling
Carton Sealing, Lining,
Wrapping, Box Making



**NEW ALCOA WRAP
KEEPS POTATO CHIPS FRESH
4 TIMES AS LONG**

... and, out eye-catches competition, too!

Laboratory tests—in-use tests . . . every test proves new duplex foil bags add *at least* 6 weeks to potato chips' shelf life. Certainly that's reason enough for the big switch to new Alcoa® Wrap. Rancid-making light can't get in the opaque package—rancid-making radiant heat stays out too. But, there's more: sparkling, colorful Alcoa Wrap foil packages are irresistible . . . make impulse sales soar!

**TAKE THE FRESH APPROACH
TO PACKAGING**

Call your converter, now. Alcoa doesn't make packages, but teams with America's top converters. This way you're assured top facilities, know-how and service all along the line. You get today's finest packaging with Alcoa Wrap.

BETTER PACKAGING



ALUMINUM COMPANY OF AMERICA

*You're always ahead with Alcoa
... greatest name in aluminum*



THE ALCOA HOUR
TELEVISION'S FINEST LIVE DRAMA
ALTERNATE SUNDAY EVENINGS





HELP YOURSELF TO FAST RELIEF!

There often isn't time for leisurely change in today's intensely competitive business world. Whatever your problem, like a headache sufferer, you want *fast* relief.

Gardner knows this, paces its services to your needs. Happily, our people have the skills, facilities, and experience to tackle packaging problems expertly and swiftly—

to summon the full impact of new or improved packaging on-the-double. This quick attention will begin when you ask for a Gardner representative to call, and won't relax as long as you employ us.

Hundreds of American manufacturers are acquainted with this Gardner concept of getting at it. May we demonstrate for you?



Many of America's greatest products go to market in "Cartons by Gardner"

GENERAL OFFICES: Middletown, Ohio—PLANTS: Middletown, Ohio; Lockland (*Cincinnati*), Ohio
SALES OFFICES in Chicago, Cleveland, New York, Philadelphia, Pittsburgh, St. Louis, Greensboro, N. C.

THE GARDNER BOARD AND CARTON CO.



Manufacturers of Folding Cartons and Boxboards

ANACIN

FAST PAIN RELIEF

- HEADACHE
- NEURITIS
- NEURALGIA



FROM THE GARDNER GALLERY OF FAMOUS AMERICAN PACKAGES

Letterpress on waxed paper,
designed by Nashua



Gravure on polyethylene,
designed by Alan Berni & Associates, Inc.

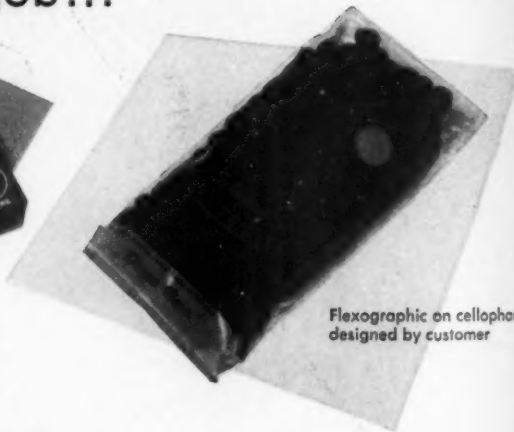


Gravure on waxed paper,
redesigned by Nashua

How to do
a super
merchandising
job...



Gravure on waxed paper,
designed by D. Herbert Dye



Flexographic on cellophane,
designed by customer

use **NASHUA** PRINTED PACKAGING

To spark impulse purchases in today's self-service stores, your package must be a sales-wrap. Ask to have a Nashua representative call and show you "The Power of the Package". Nashua Corporation, Dept. PM-6, 44 Franklin Street, Nashua, N. H. Sales offices in New York, Philadelphia, Chicago, San Francisco, and Peterborough, Ontario.

40 YEARS OF CREATIVE PACKAGING

Printed Film • Waxed Wrappers • Box Papers • Box Stays • Gummed Papers
Heat Seal Papers • Flocked Products • Party Papers • Printed Bands • Corrugator's
Tape • Sealing Tape • Moistening Machines • Technical Paper Products

NASHUA
Corporation



MODERN PACKAGING

WIDE WORLD PHOTO



How many sales are lost in department stores at peak periods like this because customers can't get a clerk to wait on them? Proper packaging speeds the sale. With packaged units customers can select what they want and, in effect, simply check out their purchases.

The awakening department store

*Suddenly, this sleeping giant
of American merchandising has become
aware of packaging and what it can do, and
the repercussions will be felt
all over the packaging field*

If it gathers momentum with the same enthusiasm with which it is starting, one of the greatest drives for better packaging ever undertaken in any retail industry could be in the making.

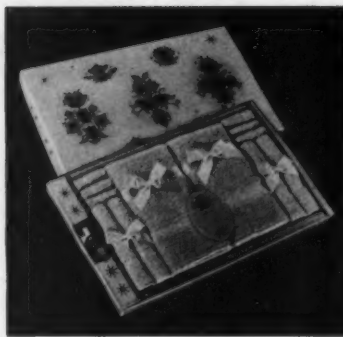
The department stores of the nation are calling on all packagers for help. As never before, these retailers are looking for improved vendor packaging to increase profits by speeding sales and by cutting down the mounting cost of store overhead and labor.

They are keenly aware at last that they have been lagging behind in adopting the kind of packaging that has wrought the miracle of the supermarket and they are embarked on a determined effort to catch up.

Under the leadership of the National Retail Dry Goods Assn. they have undertaken one of the most ambitious campaigns ever attempted cooperatively to "formulate packaging standards, ideas and designs that conform to the retail point of view," according to the stated purpose.

To this the entire packaging field says, "Amen!" Too long has there been a policy of "talking a lot

Each of these packages helps solve a department-store selling problem



Cologne with towels adds novelty touch

Dundee Mills, Inc., New York, re-designed folding cartons for bath towels for holiday gift selling. Bottle of toilet water fitted into compartment on side of each carton won for it quick shopper acceptance. Cartons by Container Corp. of America.



Longer shelf life for layettes

To make a sturdier package with longer shelf life that stores like, Arnold Knitwear Corp. just recently adopted a 1-mil polyester film wrap. Says Harold S. Guerin, company president, buyers feel free to stock these packages in large volume because of their strength and durability. Polyester film by E. I. DuPont.

but doing little" on the part of the country's retailing groups responsible for influencing \$53 billion of the \$185.5 billion annual national retail sales.

It can be hoped that out of this burst of energy will emerge the coordinated planning that will help stores and manufacturers get together on packaging decisions that have been so long needed.

NRDGA takes initiative

A packaging clinic and exhibit at the New York Statler, June 25-27, may turn out to be one of the significant packaging events of the year. It will be the first time in history that such an activity has been sponsored by the NRDGA, the top trade association of the department-store field.

A whole series of events has been leading up to this changing attitude, fostered to considerable extent by the increasing number of branch stores in new shopping areas where competition with other types of retail outlets is keener.

Two or three years ago one of the big suppliers of cellophane and polyethylene film took the lead in promoting store-level packaging of soft goods for self selection. Impressive successes at Bamberger's in Newark, N. J., and dozens of other stores have demonstrated the impact of this kind of packaging. Stores now want it at the manufacturer level.

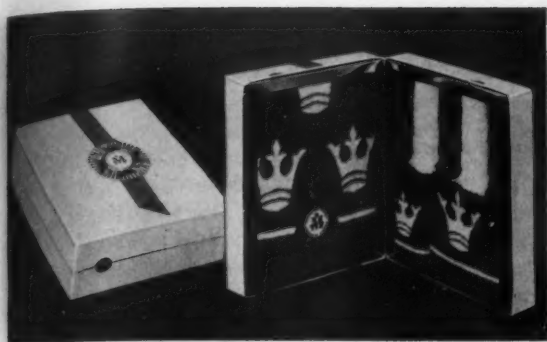
"If they are to make their desires felt, however," says George McCleary of Olin Film Div., "department stores with less than \$50,000,000 volume should operate cooperatively through their resident

buying offices. When manufacturers hear a voice that speaks with the authority of several hundred million dollars a year in sales, they will listen."

What seemingly gave the big push was the highly successful Visual Merchandising Session of the NRDGA annual convention last January, at which department-store men were so favorably impressed by the fast-moving, dramatic presentation of Sears, Roebuck's brilliant packaging and labeling program.

More impetus has been given by a survey of the opinions of 100 department-store executives in seven leading stores and three large buying offices, sponsored jointly by NRDGA and the Folding Paper Box Assn., first reported at the same meeting. This now widely publicized study, prepared by Ralf Shockey & Associates, marketing consultants, provides the kind of broad appraisal of retail packaging requirements needed to stimulate action for concentrated, coordinated effort.

The line of profits to be made through what department stores call "creative packaging," recently dramatized by spectacular packaging success stories, has also sparked greater activity—for example: properly fixtured packages that have turned brasieres into an impulse item upping sales 270% in five months; standardized packaging of underwear that has shot sales up 68% in a year; curtains in polyethylene bags that increased sales 22%; towels and wash cloths, baby supplies and other items up-styled for gift merchandising by packaging that is meeting with unusual consumer acceptance and year-



Prestige appeal upstyles the box

Wellington Sears Co. reports impressive sales increases for its Martex bath towel 1955 gift packages with heraldic "Order of the Bath" design motif. Thirty gift packages ranged from solid tops with satin-finished paperboard to window cartons and folding boxes that opened up like a book. *Box by Old Dominion Box Co.; design by John Brice.*

round increases in sales ranging from 10 to 15%.

At this time it behooves every manufacturer who sells to department stores, as well as to other retail outlets, to take a good look at his packaging in the light of what's happening. Perhaps no longer will manufacturers have to guess at what the stores want.

If the composite of store executive opinion is a guide, manufacturers in the future are going to be informed of what is wanted. An important phase of the drive is to make packaging a department-store management concern in order to establish basic policies and procure merchandise packaged according to store needs in virtually every department except "hang goods" (coats, suits, dresses, etc.).

NRDGA is suggesting that every store form a packaging committee, or task force, consisting of the superintendent, general manager and sales promotion manager, to accumulate all available information on packaging in their store and in competitive stores. Such a task force might make a department-by-department check by asking:

What items not now packaged could be packaged?

What items now being packaged could be packaged better?

Where would better fixtures help packaging to do a better selling job?

What items now selling singly could be packaged for multiple sales?

What items could be packaged to increase their sales as gifts?

In other words, the committee would serve as a



Shirts pre-packaged with self-selling story

Phillips-Jones Co. has taken the lead in offering its nationally advertised Van Heusen shirts on a completely pre-packaged, self-selection basis for men's wear and department stores.

This packaging method appears to be just about right to meet every department-store requirement. It speeds the sale. Customers select the shirts they want and, in effect, simply check them out. For dealers there's less selling time per customer. Multiple and impulse sales are increased; soilage is eliminated. The packages tie in with national advertising and the program is a year-round activity, because display units are interchangeable for winter or summer styles.

The package is a transparent polyethylene bag imprinted with the complete story of the "Century" shirt, point by point, along with artwork used in the national ads.

Selling units, 63 in. high and built of five-ply, 3/4-in. veneer in finishes to suit all store color schemes, are available in two sizes. One is 80 in. wide by 22 in. deep, which displays 10 dozen shirts in three banks of eight shirts each, stacked five deep (see photo below). The other is 49 in. high by 22 in. deep and displays 6 1/4 doz. shirts in three banks of five shirts each, five deep. Both have storage space in back for extra stock.

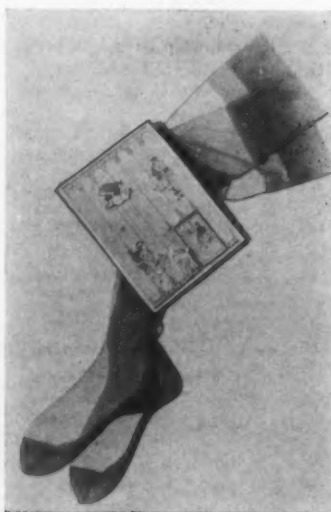
The Van Heusen package-and-fixture program has been introduced after five years of research and experimentation, and a year and a half of successful testing in 15 large department stores and 20 men's shops. Sales increases were experienced everywhere up to as much as 250%, according to Stanley C. Gillette, vice president in charge of sales for Van Heusen.





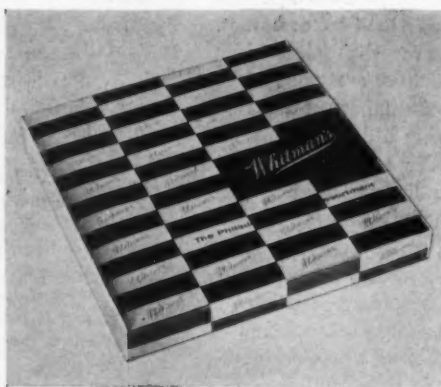
Product visibility and identity

Folding box with large acetate window, colorfully printed in wood-grain effect with cream and maroon lettering, provides masculine appearance and family resemblance for Pioneer belt boxes giving full view of product and brand identity on all four sides. Stores like attention to selling detail. Carton by Brown & Bailey Co.; lamination by E. I. DuPont.



A top holiday gift seller

Charm of this pink, red and gold package decorated with dimensional angels made Sapphire Hosiery popular with both sales forces and shoppers last Christmas. It was so successful a similar treatment was given to an Easter gift package. Boxes by Susan Crane Gift Packaging, Div. Strauss, Golman & Goldman.



Standardization in candy boxes

Stephen F. Whitman & Sons, Inc., has redesigned its Philadelphia Assortments consisting of five boxes, all in only one size of box, one layer high. Different colors distinguish the various assortments. Result: Easier to pack, easier to display, easier to keep stock. Boxes by G. A. Bisler, Inc.; design by Raymond Loewy Associates.

PHOTO COURTESY BAKELITE CORP.



For product inspection, a reclosable bag

New type self-locking closure on polyethylene bag permits sweater package to be opened for customer examination, but reclosed simply by thumbnail pressure on edges that seal the bag against air, moisture, soiling. Clarity of film permits full visibility, yet discourages handling. Bags are re-usable as home storage containers.

central clearing house for packaging information and would aid in guiding vendors to the packages that do the best selling job for them. This is similar to the technique used by the Sears staff.¹

What they want

Some "musts" have already been listed by the department-store survey. They will give tangible aid to manufacturers and vendors in their planning:

1. Design packages of a size and weight that will contribute to economy in delivery charges. Research package sizes to make them as small as consistent with the product and ultimate selling area.
2. Cooperate with stores in developing the most effective space-saving packages, particularly for branch-store handling. Keep limitations of warehouse as well as store stock space in mind. Manufacturer pre-packs can be a serious storage problem when they occupy too much space.
3. Help the shopper to buy faster and the sales person to sell faster by presenting full information about the product on the package.
4. Don't overlook protection when providing visibility.
5. Give packages a utilitarian value related to the

¹ See "Packaging Organization," MODERN PACKAGING, March, 1956, p. 145.

over-all marketing program. Don't glorify packaging to no purpose. This kind of presentation has little impact on customers.

6. Gear packages to self selection. This is an age of inexperienced and indifferent sales help (particularly in branch stores) and the package more than ever is the sole salesman.

7. Provide packages that are effective for gift merchandising. Prepare such packages with great care. Gift-appeal packaging is being emphasized over and over again today in department-store discussions.

Norris Hollingsworth, display director of Thalhimers, Richmond, Va., emphasizes pointedly the need for some of these practices.

"Packaging is a great sales stimulant, but from my experience and the reaction of our buyers, I find several main drawbacks," he says.

"Variations in sizes and shapes make it very difficult to display the package without specially designed fixtures.

"In the case of transparent packages, each manufacturer is trying so hard to outdo the other by putting so much printed matter on each package that the customer cannot see the merchandise. I would suggest putting the copy on the back.

"It would also be helpful if the back of the trans-

parent flexible package was constructed so that it would not slide out of position while being displayed.

"Often packages are too gaudy. Too many bright colors detract from the merchandise rather than add to it. One manufacturer puts out a beautiful red package; another, an orange package; still another, a pea green one. By the time the department tries to display all these assorted colors, it usually decides to hide the whole display under the counter."

Department-store retailers see packaging today as one of their greatest untapped sales potentials. It generates sales and builds profits, they say, if it does the following:

Assures attractive displays. Neat stacking may be as important as the package design itself in giving eye appeal to the merchandise.

Speeds selling time. The ability of the package to step up the transaction is becoming increasingly important in view of the shortage of sales people, particularly at rush hours.

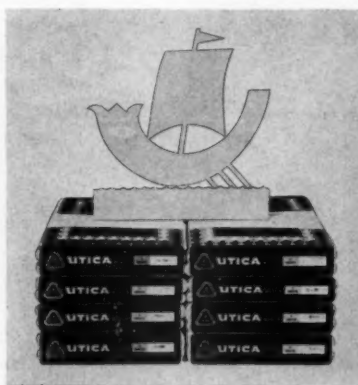
Keeps merchandise clean and sanitary. Much damage could be prevented and money saved by designing packaging to reduce markdowns and returns.

Enhances manufacturer advertising. Effective packaging today must tie in with national advertising to give brand recog- [Continued on page 242]



Partitioning displays and protects glassware

Improved methods of interior partitioning protect glassware without messy inner wrappings. This Libby Hostess Set in charcoal and turquoise box makes a handsome gift set, is ready for display on opening, with identification on all sides, even on all four sides of the base shell of the box. Pre-pack saves wrapping time in store. Box by The S. H. Davis Paper Box Co.



Complete information for easy selection

J. P. Stevens & Co., Inc., displays all information about Utica percale sheets on U-board package wrapped with clear transparent polyvinyl chloride film. Complete data is supplied on four sides, while sheet sizes are given on one end. Distinguishing colors of packages help shopper to select different sheet styles. U-boards by Container Corp. of America; "Vitafilm" polyvinyl chloride film by Goodyear Tire & Rubber Corp.



Uniform sizes: easy to stock

The Warren Featherbone Co., Three Oaks, Mich., standardized cartons for its Warren's baby pants. Procedure simplified handling for stores as well as manufacturer's shipping problem. Cartons lend themselves to effective and novel retail store display units. The need for shipping cartons of various sizes is eliminated. Cartons by Federal Carton Corp. and Ace Folding Box Corp.



These are five-packs, bundled four or six to a package to make a colorful, low-cost compliment to Father that Mother and children will buy on impulse in supermarket or drugstore. Nothing is special about the package except the rotogravure-printed cellophane overwrap.

Cigars bundled as gifts

*Wrapping multiples
in colorfully printed cellophane
makes bright Father's Day packages
of General Cigar five-packs;
with wrap discarded,
leftovers become regular stock*

At least three up-and-coming merchandising trends in the cigar field are combined in General Cigar Co.'s new Father's Day overwraps: (1) bundling, (2) disposable gift wraps and (3) spot selling in the supermarket.

Sparked by the success of similar packages for three of its cigar brands during last year's Christmas season,* General Cigar decided to go all-out for extra sales at the next appropriate cigar-giving holiday. For Father's Day, 1956, five new gift packages have been unveiled and if these go over as well as early returns seem to indicate, a whole new pattern of cigar merchandising may be on the way.

In this instance, bundling is playing a double role. First, it is helping to increase the unit sale by combining four or six of General's five-packs into a single package. This is not a new idea in cigars. But on top of it, the rotogravure-printed cellophane overwrap is serving the important second purpose of changing the whole character of the package's appearance.

Ordinarily, of course, a cigar package is designed to have a strictly masculine appeal. But for Father's Day giving, General Cigar wanted an attractive, colorful wrapper that would catch the eyes of

*See "Gift Tip for '56: More Pre-Wraps," MODERN PACKAGING, Feb., 1956, p. 79.



Display stands for supermarkets promote impulse gift purchases. Two-faced design of overwraps permits either an orderly arrangement like this, or a simple dump display in a grocery cart.

women and children—especially those shopping in the supermarket.

So the new overwraps bear little resemblance to conventional cigar packaging. For Robt. Burns Cigarillos, the wrapper is printed in bright yellow, blue, red and white, with cartoon characters and an "enjoy it yourself" theme.

A similar design appears on the Robt. Burns Panatela De Luxe package, against a gold-printed background.

White Owls appear in a shiny blue wrapper, with a family of five white owls and a "Happy Father's Day" slogan in yellow.

For Van Dyck cigars, the wrapper's background is white, with a family of four cartoon characters celebrating the occasion. And for Wm. Penn, the background is yellow and the wrapper features four Wm. Penn-like characters.

Three of these packages contain four of the regular five-packs of each of the brands; the lower-priced Wm. Penns and Robt. Burns Cigarillos are made up of six five-packs.

The cellophane used to bundle the packages is rotogravure printed and supplied in roll form. On automatic equipment, this is folded around groups of four or six five-packs and heat sealed.

To help make it possible for these packages to be sold in the familiar supermarket mass-selling fashion—as, for instance, in "dump" displays in a grocery cart parked in a heavily trafficked aisle—front and back surfaces of the overwraps are the same. And General Cigar has also made certain to feature the brand name prominently on all six panels.

As with all similar overwraps, one of the big

advantages is disposability. After the Father's Day holiday is past, the gift wrappings do not make their contents obsolete; the retailer has only to tear off the printed cellophane wrappers and the five-packs can be used to replenish his regular stock of the cigars.

Although these unusual new cigar packages were specifically designed with the supermarkets in mind (with a special corrugated display stand being offered to expand the usually limited cigar sections in these stores), General Cigar is also distributing the packages to all its regular distribution outlets, such as cigar stores, news stands, drug stores, as well as other more conventional types of cigar outlets.

Credits: Printed cellophane overwraps by Milprint, Inc., 4200 N. Holton St., Milwaukee 11, Wis. Bundling equipment by Scandia Mfg. Co., North Arlington, N. J. Corrugated display stand by Raymond C. Adams, Statler Bldg., Boston 16, Mass.

Removable wrapper can be slipped off by retailer after the holiday season is passed and five-packs are returned to his regular stock.





Handbag molded of transparent polystyrene plastic, with swiveling handles and a hinged lid, is comparable to those currently selling in department stores for as much as Swift's combined deal including a quart of ice cream.

Now it's ice cream in a handbag—an attractive molded plastic handbag with hinged cover and convenient carrying handle, ideally suited to carrying cosmetics, a bathing suit, or any of the hundred and one other items which milady may wish to carry with her.

This unusual packaging approach was developed by Swift & Co. as an Easter ice-cream promotion and was so successful that it is being carried over into the summer months on a nationwide basis. Actually, the entire program was set up as a product-premium combination, with the handbag serving as the premium.

The handbag is molded of clear transparent polystyrene containing metallic flecks which give it added fashion appeal. The ice cream is not filled directly into it. Instead, an inner paperboard liner of one-piece, liquid-tight, folding construction is filled with ice cream and inserted in the molded plastic container.

The use of this inner paperboard carton, which holds a quart of the product, makes it unlikely that the ice cream will ever touch the inside of the handbag even if melted—although it might be pointed out that the molded plastic container can be readily flushed out with water if necessary.

The inner carton in which the ice cream is packed has a hinged flap which folds down across the top and locks into the side gussets. With the cover of the plastic handbag snapped shut, the paper flap

Ice cream—

remains tightly closed. Company, product and flavor identification are provided by a printed paper label which is adhered directly to the hinged top of the plastic container.

The container, with handles folded to conserve space, is then inserted in an unprinted chipboard folding carton having a perforated window section which may be removed so that the handbag and the company and product identification can be seen through this opening. This carton may later be given an over-all printed wrap.

The entire package is sold directly from self-service, low-temperature display cabinets. Point-of-sale posters demonstrate the use of the handbag and call attention to the packages in the cabinet. Average retail price for the combined handbag and quart of ice cream has been about \$1.40. Since this would appear to be a fair value for the handbag alone, the ice cream appears almost as a bonus. Advertising support included dealer ad mats and local TV announcements.

This premium—probably the first of its kind ever used in conjunction with ice cream—was offered as a self-liquidating item, and a combination price for the handbag and ice cream was established in indi-



Retail package is a plain chipboard carton with tear-out top window exposing the plastic handbag, containing the carton of ice cream, with a paper label adhered to the inside of the lid.

in a handbag?

That's the unique packaging stunt developed by Swift & Co. as a self-liquidating premium.

Fashionable molded plastic bag actually contains a quart of ice cream

vidual market areas by local Swift & Co. ice-cream plants.

When lined with a matching scarf or kerchief, the attractive molded plastic bag fits in well with any street or recreational ensemble. The swivel handles, which fit comfortably over the forearm, are anchored firmly in the sides of the handbag. The spring-back hinged lid serves to keep the handbag firmly closed.

Credits: Molded plastic handbag container by Plastic Jewel Co., 1112 Brook Ave., Bronx, N. Y. One-piece paperboard liner and folding chipboard outer carton by Chicago Carton Co., 4200 S. Pulaski, Chicago.



Selling pitch is carried by illustrated posters to be placed on and above the retail store's refrigerated self-service ice-cream cabinet.



Components of the package are, from right to left, especially designed liquid-tight carton which contains the ice cream and fits inside the handbag, the transparent polystyrene plastic handbag and the outer chipboard carton. The polystyrene contains metallic flecks to give it added fashion appeal.

PAPER PRODUCTS

PHOTO COURTESY CONTINENTAL CAN CO.



Carefree living and colorful, serviceable products make paper plates, cups and napkins as acceptable today for parties as they are for everyday routine.

*A symbol of our throw-it-away economy,
paper cups, plates, napkins and tissues have built their volume
on economical, functional, sales-appealing packaging*

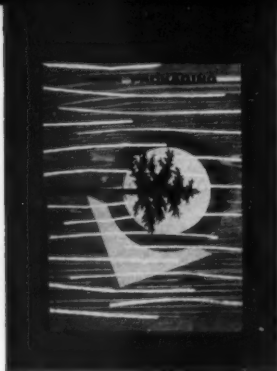
Try to imagine a day without access to such frequently used disposable paper products as facial tissues or handkerchiefs, paper cups, plates and napkins and bathroom tissue, and you get a fairly good idea how basic some of them have become in our daily scheme of living.

What modern housewife would be content to run her kitchen without paper towels, or would consider her dressing table complete without those handy disposable tissues for dozens of personal and household chores? And what home with children would

be complete without paper plates, cups and napkins to eliminate dishwashing and laundering?

All of these products—along with waxed paper, sandwich bags and a number of others—have at least three important points in common: (1) they symbolize 20th Century American living, springing from an economy which makes possible one-time use and disposal of many mass-produced items—a large number of which depend upon our rich timber resources; (2) they are made of paper, processed to meet the specialized needs of each

Industry Survey



product, and (3) all have depended largely upon well-designed, soundly constructed packages to reach their present astronomical sales volume.

The millions of paper plates, paper cups, napkins and tissues used and discarded daily add up to a tremendous volume of folding cartons, cellophane, labels, printed overwraps and other packaging materials—not to mention the huge investment which is involved in wrapping machines and other types of automatic packaging equipment which help to make possible the high-speed, low-cost packaging of these products.

There is a valuable lesson for all packagers—regardless of the types of products which they make and sell—in how manufacturers of these high-volume disposable paper items have made packaging a major factor in enlarging and diversifying their markets.

By their very nature, cups and related paper items must be relatively low in cost; in consequence, the amount which can be economically invested in packaging is limited. Nevertheless, since absolute cleanliness is a primary feature of many such products,

highly functional packaging which will protect them against damage and soiling prior to sale is imperative.

In addition, if the products are to give a good account of themselves competitively under today's mass-merchandising, self-selection methods, packages must be so designed that they will catch the shopper's eye, put the product story across and clinch the sale—all in a matter of seconds.

The rise of paper cups, cleansing tissues, kitchen towels and other disposable paper items to their present position of acceptance is closely allied to the growing emphasis on informality and casual living which has taken place in the United States in recent years.

Not too many years ago, only a daring hostess would have thought to provide her luncheon guests food and drinks served in paper plates and cups, accompanied by a "throw-away" paper table cover and topped off with matching disposable napkins. Today, however, the situation is entirely changed: women (as well as men) have come to accept disposable paper table service, on appropriate occa-

Strong identity of package is vital in this field, where products are basically much the same and consumer preference for one brand or another is established by advertising.



PHOTO COURTESY FRANK GIANNINOTO



Family design helps sell varied paper products on the strength of a single well-promoted brand name and symbol. Few do a better job of this than Diamond.

Lily's beer cups carry the seal of the U. S. Brewers Foundation, as assurance that they will not affect the flavor of the beer.



Specialty Cups



sions, as sensible and modern. For this healthy change in consumer attitudes, smart packaging and merchandising must be given important credit.

Paper cups

Paper cups are hardly new—in fact, this highly useful product has been around for nearly 50 years. Dixie Cup Co. brought out paper drinking cups in 1908. At the outset, the paper cup was sold strictly as a utility item for use by soda fountains, offices, factories, etc. It would not hold hot coffee. Not until years later, with the growth of informal entertaining and the coming of such developments as institutional food service and the use of vending machines for automatic dispensing of both hot and cold drinks, did the paper cup begin to win acceptance in the home, laying the groundwork for real volume merchandising through effective packaging.

As a result of steady growth and diversification, a typical producer of paper cups now manufactures more than 500 types and sizes, which in turn require many specialized wraps and packages for effective identification and merchandising. As a representative of this company states, "We are no longer just selling paper cups, but are pointing our production at specific markets."

Multiple cup sizes and designs, and multiple markets, require multiple packaging treatments. Physical differences in the cups necessitate explanation on the package so that the consumer can be certain he or she is getting the right type for the use intended. Some cups have handles; others do not. Some are specially processed for use with hot drinks; others fit a specific type of home, office or institutional dispenser. At least two of the major paper-cup suppliers have developed special types of paper cups for use with beer. Here again, packaging is utilized to identify the cups unmistakably and to highlight, in a few words, their special features.

With the exception of strictly utilitarian packages for commercial and institutional markets, most of the paper-cup packages in current use fall into two general categories—cellophane overwraps with printed labels, or folding cartons with cellophane or plastic film windows.

Visibility packaging in this field has grown increasingly important with the greater emphasis on color, special seasonal designs, etc., which give the

Dixie promotes cups specially processed for alcoholic beverages, offers special shapes for cocktails, old-fashioned and highballs, and includes in the set package metallized "holderettes" which serve both as a base and a re-usable coaster.

PHOTO COURTESY LILY-TULIP CUP CORP.



Children's snacks and lunches are no bother to Mother with disposable paper cups and plates. Note full-view window in Lily-Tulip package. Lily was among first to use polyester window film as assurance against breakage that would destroy sanitary protection.

cups much of their sales appeal. Dispensing function, too, has become important. One of the most interesting packages now in use for paper cups is a polyethylene-film tube used by Lily-Tulip Cup Corp., which serves as its own dispenser in the home.¹ This tube has a hang-up string at the top and is made with a constricted opening at the bottom through which cups may be drawn singly.

The amount of thought which may go into a coordinated packaging program for paper cups is indicated by the procedure followed at Lily-Tulip in bringing out its most recent line. Despite the success of the packages introduced on the consumer market in 1954, this company last year felt that further improvements were necessary. Shelf competition was stiffening as other manufacturers adopted the window-box style package and cellophane windows were being broken by curious shoppers. Some retailers were stacking the packages in "lay-down" displays, exposing the bottom panel, which had no display value. Finally, the earlier packages lacked cup size identification and carried no suggested copy showing their many uses.

As the result of a thorough study by a package-design firm, Lily-Tulip packages were changed over to black lettering against a yellow background, a combination shown by color tests to have maximum attention value and readability. Lily identification and count information were added to the bottom panel of the box, so that the packages can now be

stacked in any position, and cup size was added to the front of the package. In addition, product usage has been included on the new package in the form of gay cartoons on four panels.

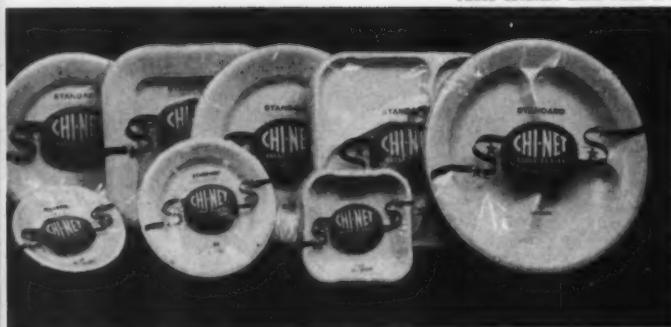
In order to save both shipping and in-store shelf space, greater density was given to the 1956 Lily packages by decreasing the number of stacks of cups per package wherever possible. Also as an out-

Sanitary appeal launched paper cups 50 years ago and is still a big factor. New Dixie Cup packages for cold and hot cups feature new Steri-Pack process of sterilized machine sealing in window cartons. Free Emily Post booklet in each package assures housewives it's proper to use paper.



¹ See "Pinching Bag," MODERN PACKAGING, Sept., 1953, p. 96.

PHOTO COURTESY KEEFER PAPER CO.



Molded pulp takes on new utility with plastic coatings. This brand uses colorful cellophane overwrap that allows visibility of products' molded-in features.

Window cartons like this one have done much to popularize the new high-styled, better-textured paper napkins. Carton by Rushmore Paper Mills.



growth of packaging research, the improved shipping containers used for window-box packages are now being made with a tear-strip opening device. Within the shippers, packages are packed two high, with the tear strip located so that when the shipper is opened it divides itself into two trays, with boxes in position for rapid price marking without removal from the trays.

One very important construction innovation made a year ago in Lily's new cup packages involved the adoption of the new super-strong polyester film for the windows, as an answer to the breakage problem. Lily was one of the first packaging users of this film. Through redesign, the window itself was reversed in position, now occupying the bottom three-quarters of the package instead of the top area. This simple change enables the shopper to see a complete cup through the window for easier selection of pattern and color. Buyers can see the cups even when packages are placed on their side in displays.

Plates and napkins

With paper plates and napkins, for which the merchandising problems closely parallel those of paper cups, manufacturers make use of two basic types of packaging, including cellophane overwraps with a backing board and printed label, and folding cartons of either the blind or window type.

Die-cut openings with transparent film windows are used frequently with embossed, high-quality napkins, which help to sell themselves when they can be seen by the shopper. For lower-priced lines, an all-over cellophane wrap, applied and heat sealed at high speed on automatic equipment and utilizing a printed paper label for price and product information, is widely used for packaging.

Many folding cartons used for paper napkins have a scored tab which is torn out to facilitate removal of napkins from the box. Another convenience device frequently employed is a pierced flap which permits the box to be hung up and used as a wall dispenser.

Cellophane overwraps, in conjunction with a paper label, find extensive use for paper plates, particularly in the lower-priced lines. One advantage of the transparent wrapper is the fact that it immediately shows off the color and design of the plates, number of units in the package, etc. In earlier days, when practically all paper plates were uncolored and looked pretty much alike, the products were limited in impulse sales appeal and transparent packaging contributed little added merchandising impact. Product developments, however, have completely changed this situation; today's shopper has a wide selection of plate sizes, patterns, colors and specially treated surfaces from which to choose.

Many packages used for paper plates and napkins represent a compromise between product visibility and product information. Some folding cartons go all-out on the matter of product features—"water-proof, odorless, heat resistant, grease resistant," etc.—while in other instances a printed label carrying only a minimum amount of copy is employed in conjunction with a transparent cellophane overwrap for product protection.

With window-type folding cartons—a style of package favored by a number of paper-plate producers—it is not uncommon to incorporate a circular opening in the bottom panel which permits the underside of the plates to extend outside the package. This type of construction shows off the plates to advantage through the transparent window, holds



Multiple packages and deals help maintain Kleenex volume. An outstanding pioneer in dispensing packages with its "pop-up" tissue cartons and pocket packs, Kleenex is now promoting its own brand of table napkins with a three-for-two deal.

the depth of the carton to a minimum, conserving paperboard, and also facilitates secure stacking of the packages at the point of sale.

Fonda Container Co., a division of Standard Packaging Corp., has done an unusually effective job of packaging for its line of paper plates by combining a cellophane overwrap with an easel-display type of paperboard label which facilitates the pricing of the packages in the store and also permits the plates to be stood upright for maximum display effectiveness in the retail outlet.²

Tissues

Disposable tissues, with their dispensing cartons and pocket packs, are another big-volume paper product whose steady growth stems largely from creative packaging. Pioneered by International Cellucotton Products with Kleenex,³ the disposable tissue as a substitute for the handkerchief marked a completely new type of product, requiring extensive public education to promote its acceptance.

Handy and useful as they are, it is safe to predict that these tissues would never have reached their current volume levels if manufacturers had not devised special packages making it possible to dispense one or more tissues conveniently. ICP for many years has promoted the exclusive "one-at-a-time" dispensing and "pop-up" feature of the Kleenex cartons and pocket packs.

With the coming of colored tissues, manufacturers have not overlooked the opportunity to work the color theme into the packages for greater display value and sales impact. [Continued on page 252]

Toilet tissue in tastefully designed multiple packs is welcomed by retailer and housewife alike—easier to stack, easier to store. Facial-tissue quality, pastel colors help sell Northern brand.



² See "Target: the Supermarket," MODERN PACKAGING, April, 1955, p. 162.

³ See "Kleenex," Packaging's Hall of Fame, MODERN PACKAGING, April, 1950, p. 136.

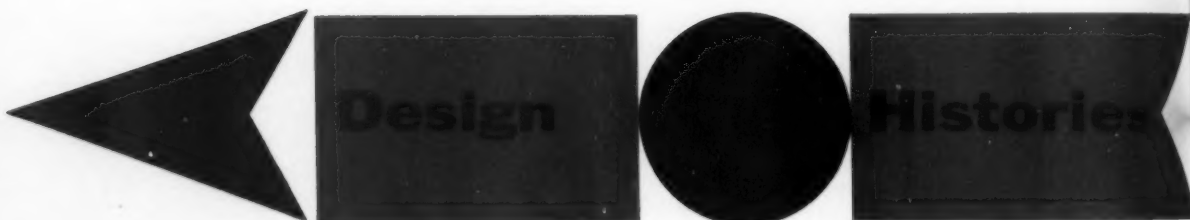


Children's Satin Set

A junior version of its successful Satin Set pin-curl hair spray has been introduced by Revlon, Inc. Called Satin Set for Children, the new product is packed in an aerosol container similar to that used for the regular spray, but with a redesigned label. The new wrap-around keeps the same basic layout for recognition value, but a few simple changes have been incorporated to make it distinctive. Revlon has changed the color of the top band and back panel from aquamarine to pink, softened the lettering in the logotype, made the Grecian silhouette motif more youthful looking and added a pink oval with the words, "for Children."

As before, the basic color of the foil label is gold, but, for the children's product, the texture of the gold background has been made more delicate in appearance by the addition of tiny flecks of pink and aquamarine color. On display, the colors on the two labels are designed to complement each other, yet make each easy to distinguish.

Credits: Labels by Donrico, Inc., 438 W. 37 St., New York 18. Aerosol by Continental Can Co., 100 E. 42 St., New York 17.



Tiny tape-recorder box

In keeping with the miniature size of its Midgetape tape recorder, Mohawk Business Machines Corp. has developed a container that places an equal emphasis on compactness. The new carton is reported to take up one-third less space on the dealer's shelf than the old container and to eliminate double packaging of the recorder and its components. At the same time, the carton serves as a display container.

The shipping-display carton is made from 200-test kraft board with a white linen-weave finish. When it is opened, the top flaps may be folded back, as illustrated, to form a slanted display platform, with a separate insert forming a headpiece printed with the name of the product. The only other copy is on the lower panel, where five sales points for the \$249.50 device are printed. A die-cut platform supports the recorder itself and the tiny cellophane-wrapped earphone and microphone, both of which are smaller than a postage stamp.

Credit: Carton by Grand City Container Corp., 2001 Tonnelle Ave., North Bergen, N. J.

Modern Puerto Rican beer

A modern new trademark and an array of new labels, bottle crowns, cans, carry cartons and shipping cases—all designed with a family resemblance—have been introduced by Cerveceria India of Puerto Rico. With the opening of a large new plant, the company decided to bring up to date its traditional package designs.

The lettering style in the name "India" was retained, although in slightly modernized appearance, since it was felt that its identity had won considerable acceptance from Puerto Rican beer drinkers. All other design elements were changed radically. The arrowhead-shaped bottle label was replaced by one with rounded triangular contours; bright gold foil labels feature simple, clean red, yellow and black lettering; and bottle crowns, six-bottle carriers and shipping cartons continue the same design theme and colors.

Credits: Market research and design program by Martin J. Ferguson, Rye, N. Y. Labels by Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky. Cans and bottle crowns by Continental Can Co., 100 E. 42 St., New York 17.



Design

Histories

Inserts convert hosiery boxes for seasonal gifts

Attractive inserts with different appropriate gift messages for a number of special occasions have been introduced by Knit Products Co. Aimed at making its boxes "all-occasion" gift packages, Knit Products supplies an assortment of 10 different inserts with each shipment of its Vision hosiery to department stores. Conventional set-up boxes are used, with an irregularly shaped cut-out window in the lid, which is printed in a gold and black motif.

The retailer may select an insert reading: "Easter Greetings," "Happy Birthday," "Happy Mother's Day," "Have a Wonderful Time," "Bon Voyage," "Happy Anniversary," "Thank You," "Season's Greetings," or "To My Valentine"—whichever is appropriate to the season—and slip it under the window. When the occasional appeal is not required, stores may replace them with a tenth insert (illustrated) which tells the "style story" of Vision hosiery. There is never a problem of after-season stock.

Credit: Boxes and inserts by Lassiter Corp., 1143 E. Fourth St., Charlotte 4, N. C.





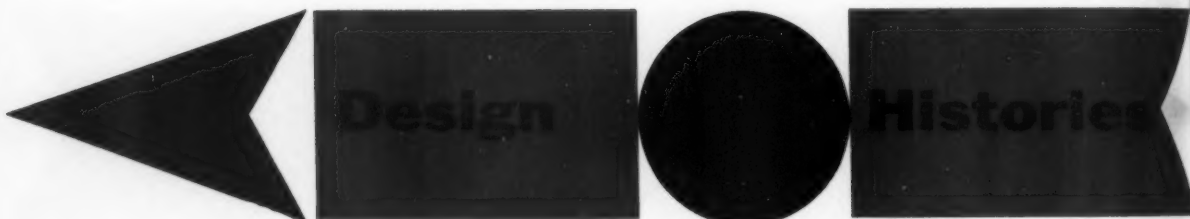
More hard-box cigarettes

It looks like the revolution to overthrow the traditional cigarette package only has gotten started. Forces at work in the cigarette industry reflect more pointedly than ever the increasing relationship between packaging and sales.

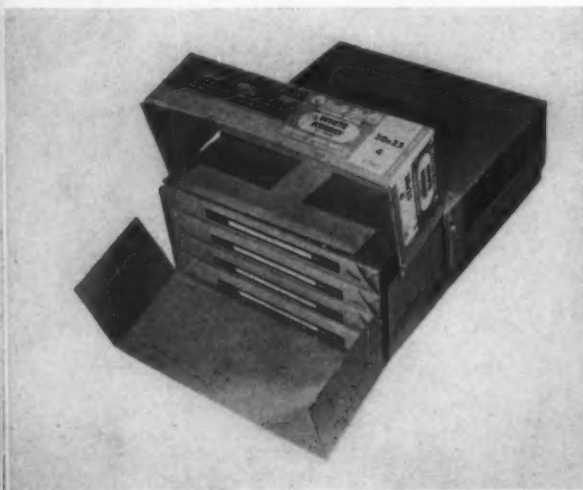
New signs of the importance of the flip-top box that's made Marlboro famous is the latest move of Philip Morris Inc. In California, Oregon and Nevada, long-length Philip Morris cigarettes are being sales tested in a flip-top box printed in the same red, white and gold design as the recently introduced new pouch pack for Philip Morris regulars and king size. In Providence, Rochester, Toledo and Youngstown, PM is sales testing long-size filter mouthpiece Parliament cigarettes in a white flip-top box with royal blue lettering.

In New York last month Riggio Tobacco Corp. launched with great pomp and ceremony its new Regent cigarettes in a continental-style flip-top containing twin packs of 10 each.

And rumor has it that Liggett & Myers will be next with L & M long size in a hard box by July.



Hinge-opening carton for reams of gummed paper



To give better protection to its "Really Flat" sheets of gummed paper, Mid-States Gummed Paper Co. has introduced a new quick-opening, hinged-top, telescoping corrugated carton. To open it, the gummed-tape fastener is ripped apart by pulling on string ends at die-cut intervals. The hinged end of the top section of the carton is lifted up and the front panel of the lower section pulled out. This exposes the ends of four or five reams of paper, each individually wrapped and sealed in moistureproof paper.

After one or more reams have been removed, the remaining contents are protected in the carton from dust, moisture, vermin, etc., by folding the front section back up and dropping the hinged lid back into place. One of the advantages of the new carton is that it may be opened without being completely removed from a stack, since it need be edged out only far enough for the gummed-tape strip to be exposed. Printed identification labels appear on the end and two sides of the carton, as well as on the ends of each of the enclosed wrapped reams of gummed paper.

Squeezable Tartan

A colorful new squeeze-to-use bottle has been introduced for McKesson & Robbins' popular Tartan suntan lotion. The company has adopted an extruded polyethylene container which has a special dome-like nozzle which dispenses the lotion when the bottle is given a gentle squeeze. A protective cap fits over the dispensing nozzle when the product is not in use.

The lotion, a greaseless formulation to prevent sunburn, contains ethyl alcohol and several other active ingredients and is reported to be well protected by the polyethylene container, with breakage and cracks, dents and messiness caused by leakage being eliminated. Carrying out the "Tartan" theme, the container is printed in a simulated-plaid design of red and black stripes against a background of yellow polyethylene. Each bottle is 1½ in. in diameter and 4¾ in. high, holding 4 fl. oz. of lotion, with a flat bottom surface which permits it to be displayed vertically on a store shelf.

Credit: "Bracon" polyethylene containers by Bradley Container Corp., Maynard, Mass.



Design

Histories

Printed polyester film bags for furniture covers

Among the first users of printed transparent bags made of polyester film is the Plastic Woven Products Co., which is using them to package Air-Lite saran furniture cloths. The colorful cloths, which are designed to be used in recovering beach and deck chairs, are sold on wire display racks in supermarkets, hardware stores and furniture stores, where they often must undergo rugged self-service handling by customers, who may like to feel the material between their fingers. The polyester bags are made to stand up under this kind of treatment and are printed with brief descriptive copy. Ends are folded over and secured with a metal eyelet, from which the packages also can be hung on a display rack. Reverse side of the package gives complete instructions for applying the chair covers and additional copy lets customers know that the polyester bags have many re-use possibilities.

Credits: Bags designed and produced by Milprint, Inc., 4200 N. Holton St., Milwaukee 1, Wis., using "Mylar" polyester film by E. I. du Pont de Nemours & Co., Inc., Wilmington 98, Del.





Four times shelf life of ordinary flexible coffee package is claimed for these new duplex bags of printed cellophane and glassine which are formed, filled and sealed automatically.

PHOTOS COURTESY OLIN FILM DIV.



For greater economy, Duncan uses plain, unprinted cellophane over printed glassine for restaurant and institutional packs of Maryland Club and its Admiration brand.

Film-bagged coffee

*Duncan Coffee Co.'s aim to save the consumer money
with flexible packaging leads
to efficient new form-fill-seal package of cellophane-glassine*

The Duncan Coffee Co. of Houston, Tex., is reportedly one of the biggest independent coffee roasters using flexible packaging. For 31 of the 38 years it has been in business, it has been marketing coffee in bags.

In fact, Duncan stakes a large part of its reputation on the cost savings accruing to the consumer with flexible packaging, based on a slogan, "Buy the bag—save the difference."

This promotion, according to the company, has raised the market position of Admiration to its present high potential. All of Duncan's Admiration Coffee packages sell in direct competition with vacuum-canned coffee.

And with a currently new duplex cellophane-glassine bag made automatically on special machinery of the form-fill-seal principle developed by the company, Duncan sales are running well ahead of previous records without previous premium cou-

pon and during a period when coffee consumption generally has been down due to high prices.

In competition with other brands in metal vacuum packs and other types of packages with supposedly longer shelf life, Duncan might have been in a vulnerable position with its save-by-buying-in-the-bag theme if it had not been for the company's constant study to improve the flavor-retentive properties of its bag packages.

Duncan Coffee Co.'s file of information on the flexible packaging of coffee covers information on almost every type of suitable packaging material and its research has lead to the new kind of automatically produced, duplex cellophane-glassine package which apparently has been so effective that it could influence a wider use of all types of film packaging for coffee in view of today's high prices. The economies of the packaging method may also have application in totally unrelated fields.

In addition to the longer shelf life, the package represents substantial savings that can be passed on to the consumer. The automatic packaging has substantial savings in both material and labor costs. Materials for the package require only about 15% of the storage space of cans.

And Duncan feels the seal of the new package is almost as effective as a hermetic seal, giving, it says, four times as much shelf life as conventional flexible coffee packages and reducing stales as much as 50%.

Duncan started considering transparent films in an effort to improve flexible coffee containers in 1939. The company was aware at that time that prefabricated kraft bags were limited to two weeks shelf life when four weeks were needed to compete with vacuum-packed coffee in its distribution area (one-third of the United States, including Texas, Oklahoma, Louisiana, Arkansas—an area about 850 miles across).

Tests were interrupted by World War II, but re-

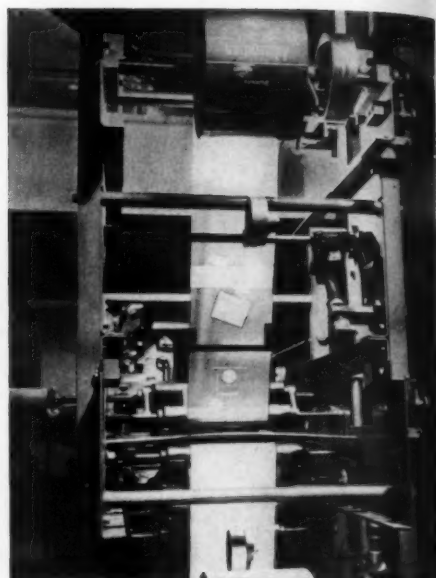
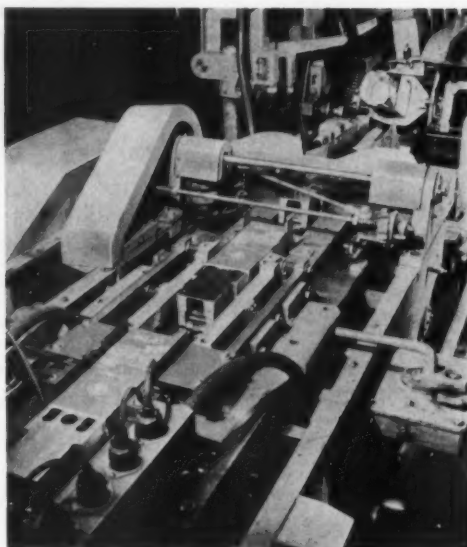


Standard for taste test was vacuum-packed can. In every test the automatically made cellophane-glassine bag appeared to hold flavor longest of any of flexible test materials. President Herschel Duncan headed the panel of tasters.

Over-all view of packaging equipment at Duncan Coffee Co. plant. Roll stock passes over traveling mandrel, is wrapped around mandrel and heat sealed. Stripped from mandrel, formed bag is flipped into position for filling, passes crimping unit for top seal and emerges (right) for baling.



**Detail of the
Duncan automatic
coffee-bagging operation**



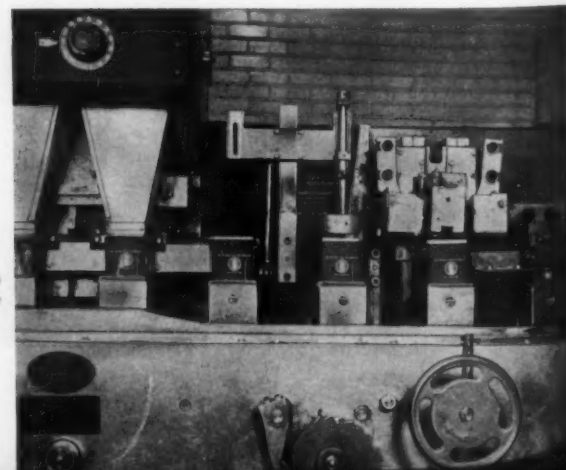
From humidity vault roll stock passes over mandrel by electric eye that controls cutting.

Formed bags are sealed along side seam. The film is wrapped around mandrel so no bottom seal is necessary.



Bags flip up into position under filling heads and pass on to unit that makes top seal.

Crimp sealer makes inner folds of gussets that come within only $\frac{1}{2}$ in. of meeting to allow for pressure release from within package.



sumed later for three continuous years. The tests were run four times a year, 12 weeks each, one on the heels of the other.

Various combinations of packaging materials were used, including cellophane and other transparent films and foil. On completion of research the company came to the conclusion that the combination which proved most economical and efficient for its purpose was cellophane and glassine.

Tests were principally taste tests with the president of the company, Herschel Duncan, heading the panel of tasters. Vacuum-packed cans of coffee were used as the standard and tests were conducted blind.

In a coffee taste test, the tasters first smell the dry coffee, then pour hot water over it and stir before tasting. In Duncan's tests the cellophane-glassine bag appeared to give the best results with the greatest economy.

Duncan's next problem was to build a bag that would have the longest possible shelf life. This demanded one that would be fully protective yet emit gases without ripping the bag. The bag also had to prevent entrance of oxygen, the acknowledged cause of staleness and rancidity of oil content. This led to a desire for a form-fill-and-seal package that would be economical and also have a minimum area of seams to stand up under any possible build-up of pressure from within the package.

Machinery has since been developed which takes roll stock from a humidity vault and places it directly over a traveling mandrel by an electric eye that controls cutting. The film is wrapped around the mandrel so that no bottom seal is needed. Side seams are formed by heat sealing plus a thermoplastic adhesive.

The package is stripped from the mandrel and flipped into the next two units of the machine for filling and sealing. There is an automatic cut-off of the weighed coffee if the bag is not there to receive it. The machine operates at speeds of 30 to 40 bags a minute.

Most important element of the new Duncan package is the manner in which the top seal is formed. Both sides are brought in to form gussets and the inner folds of the gussets come only within $\frac{1}{2}$ in. of meeting each other. This construction forms an intentional weak spot in the seals to act as a release valve when pressure builds up within the package, yet does not permit any appreciable entry of oxygen.

On store shelves Duncan's Admiration Coffee in new flexible packages sell in direct competition with coffee packaged in vacuum can.



Baling saves 7 cents per bale over conventional case-packing materials. A 24-lb. case of coffee baled in bags weighs less than half that of a 24-lb. case of vacuum-packed canned coffee.

Duncan is using printed cellophane in combination with plain glassine for its consumer brand of Admiration coffee for more attractive appearance, but for economy uses plain cellophane over printed glassine for its Maryland Club and Admiration brands for restaurants and institutional use.

Further economies have been effected by Duncan through the use of bales at $3\frac{1}{2}$ cents apiece instead of corrugated cases at $10\frac{1}{2}$ cents apiece for shipping containers. The savings in all of this flexible packaging is also reflected in the comparison of shipping weights. A 24-lb. case of coffee in cans weighs 33 lbs. A 24-lb. case of coffee packaged in bags weighs but 25 lbs. Even when corrugated cases are used for shipping there is a saving of 8 lbs. per case in bagged coffee over coffee in cans, resulting in a substantial saving in shipping costs.

Credits: Duplex cellophane-glassine packaging material produced by Shellmar-Betner Flexible Packaging Div., Continental Can Co., Mt. Vernon, Ohio, using cellophane by Olin Mathieson Chemical Corp., Film Div., 655 Madison Ave., New York 21; plain glassine liners by Riegel Paper Corp., 260 Madison Ave., New York, and Rhinelander Paper Co., Rhinelander, Wis., and printed glassine by Riegel Paper Corp. and Daniels Mfg. Co., Rhinelander, Wis. Original machinery development by Shellmar-Betner Div., Continental Can. Forming and filling machinery produced by Package Machinery Co., East Longmeadow P.O., Springfield, Mass. Kraft baling bags supplied by Olin-Mathieson Chemical Co., West Monroe, La.



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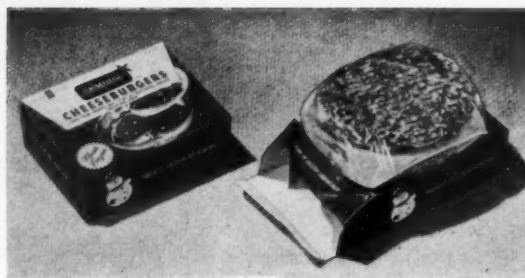
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Modern

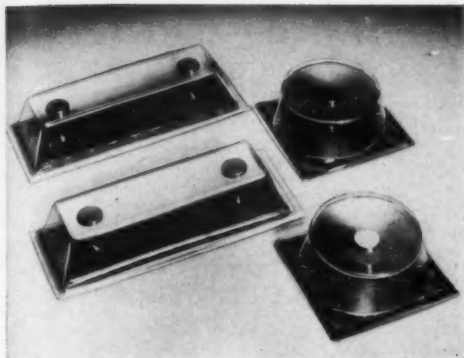
Pageant

- 1 Procter & Gamble Comet cleanser is packed in two sizes of foil-labeled metal-end fibre can, regular 14-oz. and a 21½-oz. "giant economy size." Containers, American Can Co., New York.
- 2 To get wider distribution for its Lik-M-Aid, an "eat-or-drink" candy, The Fruzola Co. has introduced a package of five envelopes of different flavors, overwrapped in cellophane and put up in 24-unit display cartons. Cellophane overwraps, Olin Film Division, New York. Envelopes, Kellogg Container Div., U. S. Envelope Co., Springfield, Mass. Cartons, American Folding Box Div., Central Fibre Products Co., St. Louis.
- 3 Gold-colored waxed paper, with a glossy, metallic-ink sheen serving as background for six-color wafer illustration, makes this new Sunshine Biscuits, Inc., package stand out on the store shelf. Cinnamon

Wafers inside folding carton are waxed-paper wrapped in three smaller unit packs. Wrap, Marathon Corp., Menasha, Wis.

- 4 To make things easier for the typist, Carteret Printing Co. has combined carbon paper and second sheets in a single box, which is dubbed the Duplisette. Originally available only on a custom basis, it is now to be marketed nationally. Boxes, American Package Co., New York.
- 5 A new protective dress on Armour & Co.'s Flash-Frozen meats features six-color waxed-paper overwraps and close-adhering cellophane innerwraps within paperboard folding cartons. Design, Raymond Loewy Associates, New York. Waxed paper overwraps, KVP Co., Kalamazoo, Mich. Cartons, Michigan Carton Co., Battle Creek, Mich.; Chicago Carton Co., Chicago; Marathon Corp., Menasha, Wis.

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Packaging

6 Formed acetate packages protect these brass and chrome knobs and drawer handles made by Colonial Bronze Co. Acetate sheet conforms to outlines of hardware, with printed paperboard bottom and acetate cover sheet fitting into flanges. Packages, Plastic Artisans, Inc., Port Chester, N. Y. Cellulose acetate, Celanese Corp. of America, New York, and Monsanto Chemical Co., Springfield, Mass.

7 Special bait for catching fish is put up in glass jars with metal screw-top closures by Fred Gould & Sons. Glass jars and metal closures, Owens-Illinois Glass Co., Toledo, Ohio.

8 A self-contained shelf tray creates a combination unit for new 6-oz. "Crystal Cabinet" and the regular 9-oz. bottle of Lavis mouthwash. Paperboard collar fitted over small bottle is spot glued to tray to prevent pilferage. Trays, Waldorf Paper Prod-

ucts Co., St. Paul, Minn. Bottles and closures, Owens-Illinois Glass Co., Toledo, Ohio.

9 An easily opened kraft outer wrap for Rap-in-Wax Paper Co.'s rolls of waxed-paper bread wraps is designed to be removed in a matter of seconds, without knives or other cutting tools. Made of heavy kraft, it has an easy-opening tear tape. Outer wrap, Mosinee Paper Mills, Mosinee, Wis.

10 In Great Britain, Harold Poupart, Ltd., has introduced a novel package for ready-to-use garden vegetables. This combination pack of stew ingredients is put up in a folding carton subdivided by a U-shaped insert, then automatically overwrapped with heat-sealed cellophane. Overwraps, British Cellophane Ltd., London, England.

11 Phenolic-lined drums with threaded polyethylene plugs to prevent rust are used by Dow Corning



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14



12



15

Modern

Pageant

- Corp. for shipping Mold Release Emulsion. An inner tap-out seal inside each 55-gal. lithographed drum protects the contents in the event plug is lost. Polyethylene plugs, Rieke Metal Products Corp., Auburn, Ind.
- 12** To prevent sifting and protect flavor, Weldon Farm Products, Inc., has adopted sealed foil wrappers, rotogravure printed, for its Alba Nonfat Dry Milk, put up in 5- and 3-qt. sizes. Both feature a quart bottle of milk. Wrappers, Milprint, Inc., Milwaukee, Wis.
- 13** Five-pound polyethylene bags of grass seed used by Page Seed Co. are printed with brand name and sales message. Replacing conventional cotton textile packages, the bags are said to be more economical,

not catch dust and prevent ink's fading in sunlight. Bags, Central States Paper & Bag Co., St. Louis, Mo. Polyethylene, Visking Corp., Terre Haute, Ind.

- 14** Bubbling Brook Danish butter, sold in Great Britain by Nurdin & Peacock, Ltd., has switched to a new wrapper made from 0.009-gauge foil laminated to vegetable parchment with microcrystalline wax. Wrappers, Venesta, Ltd., London, England.
- 15** A new 12-oz. bottle for Canada Dry's Hi-Spot lemon soda has a grooved and tapered lower body rising to a rim which protrudes to act as a hand grip. Six-bottle carry packs also have been redesigned. Design, Raymond Loewy Associates, New York. Bottles, Owens-Illinois Glass Co., Toledo, Ohio. Cartons, Julian B. Slevin Co., Inc., Lansdowne, Pa.

16



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Packaging

- 16** For its Nutro plant food pellets, Smith-Douglass Co. uses two corrugated cartons. Regular slotted carton (left) holds six 10-lb. packages. Counter display carton for 24 2-lb. packages of Instant Nutro. Cartons, Hinde & Dauch, Sandusky, Ohio.
- 17** Evergreens are shipped by Sherman Nursery Co. in heavy-duty corrugated containers resembling those used for major appliances. Octagonal sleeves have top and bottom caps which are attached by interlocking flaps and held in position by single steel straps. Containers, Gaylord Container Corp., Div. Crown Zellerbach Corp., St. Louis, Mo.
- 18** Sales increases of 25 to 30% are credited to a new foil-laminated, heat-sealed overwrap used by Wyandot Meat Products for its line of frozen meats. First

product in the new wrap is buttered beefsteaks. Overwraps, Milprint, Inc., Milwaukee, Wis. Foil, Aluminum Co. of America, Pittsburgh, Pa.

- 19** Sauce Lamaze, a special sauce developed by an internationally famous chef, is now offered in consumer-size jars by Cream-Wipt Foods, Inc. To promote the new product, regular 8-oz. jar and smaller 4-oz. container are joined with red cellulose bands, which also hold brochure and card in place. Cellulose bands, American Viscose Corp., Philadelphia.
- 20** Concentrated tomato juice, ready to be mixed with cold water for serving, has been introduced by Instant-Made Tomato Products Co. The 6-oz. can makes 24-oz. of juice; the 11-oz. size makes 46 oz. Cans, Continental Can Co., New York.

Something up the sleeve

*Minneapolis-Honeywell shows how
simple corrugated sleeves
can be effective
unit and shipping containers
for the most delicate instruments
—at a 50% saving in cost*



Die-cut pads with cushioning material are assembled at each end of long, tubular aircraft fuel-measuring instrument. Protection of this delicate electronic sensing element is vital. End is then inserted into one of the two telescoping taped corrugated sleeves.

A revelation in the cost-cutting potentialities of corrugated sleeve-type containers, even for the most delicate of products, may be found in a system worked out by packaging engineers of the Aeronautical Div. of Minneapolis-Honeywell Regulator Co., Minneapolis, for its aircraft fuel-measuring instruments.

Shipping costs for this product have been cut in half by the use of telescoping taped sleeves in which each instrument is suspended on die-cut pads at each end. A 55% saving in material and labor costs has been realized in the master shipping container, which is now a stitched corrugated sleeve, replacing a wood crate. Special equipment has been developed to stitch the master sleeves in lengths up to 8 ft.

The telescoping sleeve-type unit container would be adaptable to any similar product in which the principal dimension is length. Savings will be particularly marked where the girth is standard and lengths vary widely. The Honeywell fuel-measuring instruments vary in length from 8 to 80 in. and the standard-sized sleeves are simply telescoped or cut to length.

The importance of these instruments to aircraft safety can scarcely be over-estimated.

Years ago weight-wary aircraft designers first discovered that fuel could be satisfactorily carried in the wings of a plane. Then, during World War

II, Minneapolis-Honeywell engineers developed the first electronic fuel-measurement system.

Many times more accurate and reliable than "float" methods used in fuel measurement since the days of Model T cars, it includes a cockpit indicator and one or more tabular sensing elements mounted in the fuel tanks. Electrical signals through the elements enable them to "feel" the fuel in the tank and signal the quantity to the cockpit gauge.

Each element is built for the specific tank in which it is used. When wing and fuel tank size or shape is changed, the elements must be redesigned, too. Honeywell has built more than 500 variations of its electronic system. Nearly all require different-sized tank-sensing units. All are produced and packaged with infinite care, for even a small dent or scratch on the surface of the element will cause it to give an incorrect signal and an inaccurate fuel-quantity reading on the gauge in the cockpit.

Seeking a safe yet simple package that would be adaptable to many size variations, Honeywell packaging engineers worked with representatives of its container supplier in developing the tanned corrugated sleeve with its die-cut end pads. The method was adopted in place of the previous system of wrapping units individually in corrugated.

Sleeves, stocked in only two sizes, can be telescoped to fit various tank-element lengths.

With the new system, wooden crates at first re-



Telescoping of two sleeves gives added strength and permits a package adjustable in length from 8 to 80 in., to cover entire range in instruments.

Taping the joint, where the overlapping sleeve ends, completes the package.



placed the full wooden boxes previously used as master containers. Then, in cooperation with another container company, equipment was developed which could stitch corrugated sleeves in lengths up to 8 ft. These were found to be strong enough to stand stacking loads and shipping hazards.

Master sleeve containers are now standardized in four- and nine-unit sizes and in 2-, 3-, 4- and 8-ft. lengths. If other tank-element lengths must be accommodated, the sleeves can be cut. Small voids can be filled to reduce carton cutting.

End closure of the master sleeve is effected simply by setting in an end piece with turned up edges and stapling it around the edges.

In contrast to the former wood boxes, the new,

knocked-down shipping cartons take less storage space, can be imprinted with the company name and trademark, and weigh much less, resulting in easier handling without loss of the desired protection.

The package received honorable mention in a competition for solid and corrugated fibreboard containers conducted by the Society of Industrial Packaging and Materials Handling Engineers at its last annual show.

Credits: Taped corrugated unit sleeves supplied by Waldorf Paper Products Co., 2250 Wabash Ave., St. Paul 4, Minn. Master containers by Federal Container Corp., 516 Second Ave. N., Minneapolis 3. Containers and stitching equipment supplied through Allied Commodities Co., 5601 W. Lake St., Minneapolis 16.

Master sleeves can be cut to length and are set up on special stitching equipment that will handle lengths up to 8 ft. They come in two standard sizes to take either four-unit or nine-unit containers.



Closing the master is just a matter of setting in an end piece and then stitching it around the edges. Saving is 55% over that of the wood boxes formerly used for these instruments.



OWENS-ILLINOIS ASSURES YOU A



Co-ordinated Research

Pure research into formulae and fabrication of glass, *packaging research* into processing and handling methods in customer plants, and *market research* into consumer attitudes, add up to greater specific value for your packaging dollar.



Engineered Design

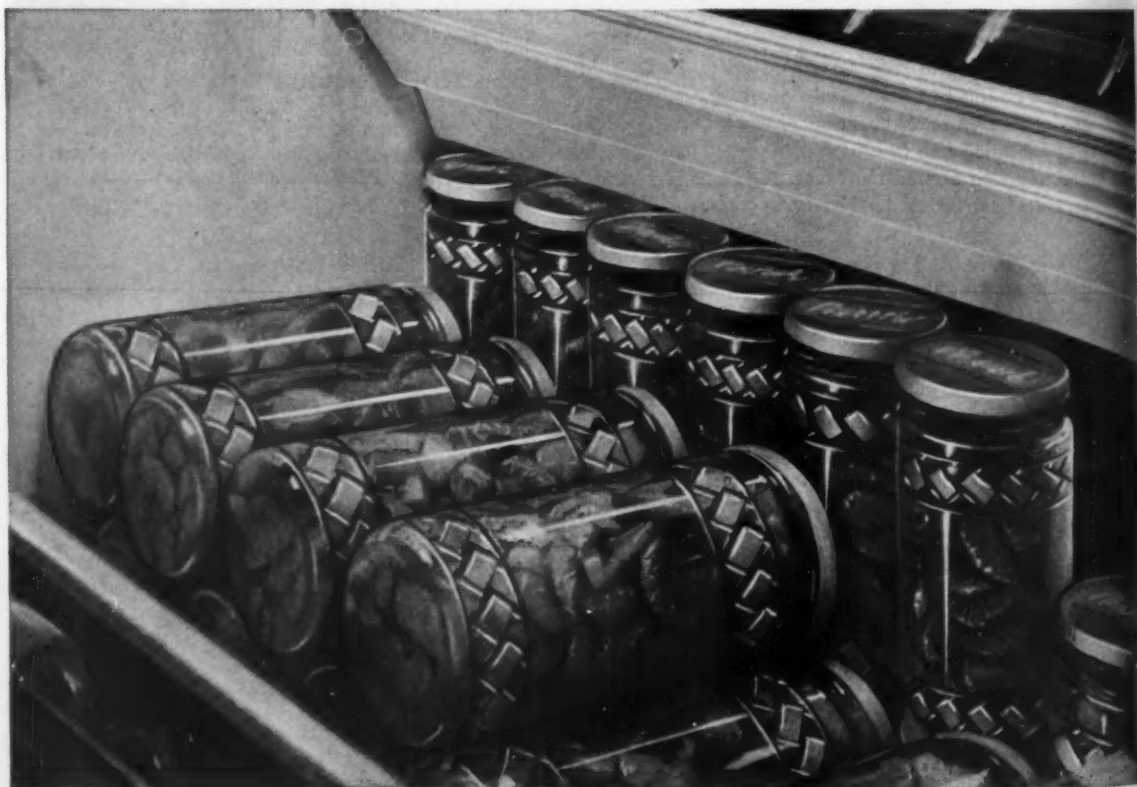
The package that takes your product to market must take *three* needs into account. Considerations of its function in the retail store, its operating efficiency and its consumer utility all become a part of the prescription for an Owens-Illinois package.



The Right Container

Versatility of facilities enables Owens-Illinois to supply containers to meet special needs: Duraglas containers for almost any item; Libbey Safedge packing tumblers or premiums; Kimble Ampuls and Vials; and a variety of Owens-Illinois plastic containers.

New Adventure



COMPLETE PACKAGING APPROACH



The Right Closure

Know-how as to the best available liner and closure—best for packing, displaying, or using a specific product—may well be one of the most important single points through which expert packaging counsel will reward you many times over.



Needed Fitments

With emphasis on the word "needed," Owens-Illinois specialists are keenly aware of sales benefits possible through use of plastic shaker and pour-out fitments which are not "gadgets" but which increase consumer satisfaction with your product.



Merchandising Cartons

Modern cartons are developed only through systematic consideration of their opportunity to serve you in the retail store and retail warehouse as well as on your own filling line and in transit. Owens-Illinois is pioneering such developments.

in High-Speed Selling...



*Fast Shipment,
high impulse value
move fresh fruit salads
in Duraglas containers*

Fresh, ripe citrus fruits... ready to eat and full of flavor... are now appearing in your local market's displays packed for impulse sales in gleaming Duraglas salespackages.

Rushed to market and displayed on ice, and in coolers, they call for all the important high-impulse, high-protection benefits of glass.

In Duraglas containers, these flavorful fruit salads can't absorb unwanted flavor from the package or water from melting ice. The package itself retains its shape and visual appeal from packing plant to the consumer.

Duraglas containers, designed especially for this new merchandising

idea, combine the benefits of an attractive package and complete product visibility.

If better display, greater protection, or high impulse value is important to your product, call in your local Owens-Illinois representative for suggestions on merchandising with Duraglas salespackages.

DURAGLAS CONTAINERS
AN **®** PRODUCT

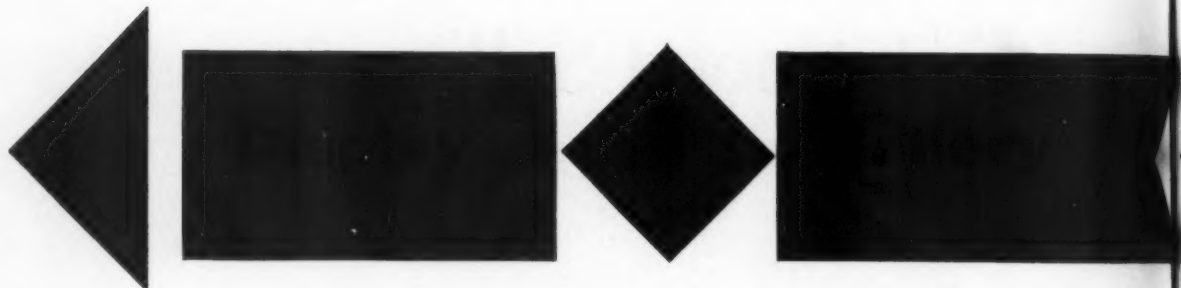
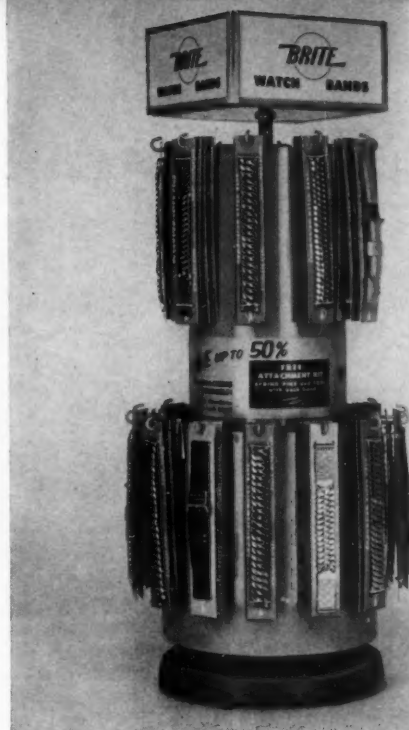
OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO

Revolving watch bands

To provide a fully comprehensive yet compact display "department" for a complete assortment of watch bands in chain and large independent drug stores, Brite Mfg. Co. introduced this revolving metal unit. Its objective—to increase band sales to a level which would be in proportion to the counter space devoted to the line. Since its introduction a few months ago, Brite has succeeded in placing the display in more than 1,300 stores—almost half of which had not previously sold watch bands. In those stores which had already been offering metal and leather bands, the revolving display is credited with increasing sales during the past six months by 63%.

The all-metal display unit takes up only 8 sq. in. of counter space, but has room for an array of as many as 140 individual bands, in 23 different styles. It can be rotated manually and has a light box at the top with flasher illumination.

Credit: Display by Harold Koch Co., 501 Fifth Ave., New York 17.



Blanket under acetate

A combination display and retail carton now used by J. C. Penney Co. lets customers see the electric blanket it contains, but protects the blanket from being soiled. The two-piece display consists of an easel and a projecting panel for merchandising copy, which are constructed to fold and lock into one another to support both the blanket and its automatic control device. Both are made of white rigid folding boxboard, printed in black and orange, with a panel showing a girl's head and hands—one hand seeming to hold a card on which the blanket is described, the other holding the automatic control.

The blanket itself is packaged in a two-piece, fully telescoping carton which opens up when the sides are pulled apart. For display, the cover is placed over the bottom section and a black frame with an acetate window is fitted over the blanket between the cover and the bottom of the carton.

Credit: Display and carton by Robert Gair Co., Inc., 155 E. 44 St., New York 17.

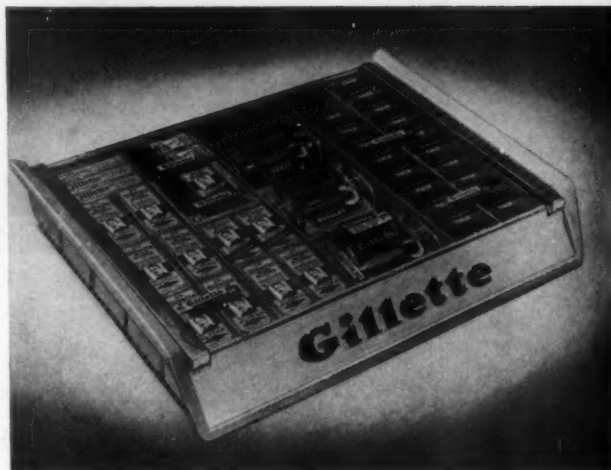


Glass-covered box sorts out razors and blades

A completely new counter display case with a hinged glass lid has been offered to retailers by the Gillette Safety Razor Co. Designed for featuring razors and blades, it has been divided to offer the various package assortments and quantities in accordance with latest information on consumer rate-of-sales flow developed by Gillette research. In this way, says the company, maximum sales can be combined with a balanced inventory.

The new unit, the GV-49, is rectangular in shape, with a one-piece base made of gray vacuum-metalized polystyrene with fixed merchandise dividers and a plate-glass hinged lid. A three-dimensional Gillette brand identification features the company's familiar logotype in blue, outlined in gold against a white ribbed background.

Credits: Display cases by Foster-Grant Co., Leominster, Mass. Design by Samuel Ayers, Jr., Associates, 711 Boylston St., Boston, Mass., with lettering and name panel designed by Peter Schladermundt, 205 E. 42 St., New York 17.



Watches get dunked

To give a dramatic demonstration of the waterproof and shock-resistant qualities of its Timex line of watches, United States Time Corp. has developed this unusual illuminated, motorized display. A fractional-powered electric motor drives a set of paddles with attached fins through water in a tank. As the paddle turns, two fins alternately lift and drop a demonstrator watch into a bath of water. Both the paddles and the water tank are injection molded of clear polystyrene.

A fluorescent lamp illuminates the display, with copy on the panel, in white against a rich gold background, being spotlighted. The front and side of the case are made of glass set into a wooden base. Watch boxes are displayed on metal racks which are attached to two hinged doors. As a guard against pilferage, locks are provided for each of the doors. The entire display unit is finished in gold lacquer. Background for displaying watches is jet black.

Credit: Display by Copeland Displays, Inc., 537 W. 53 St., New York 19.





Visibly packaged in polyethylene film, these miniature die-cast metal toys have a perforated label by which they may be hung on wire racks. Film is formed around the toys, of varying shapes and sizes, completely automatically.

A new way to

*Continuous machine forms and seals a polyethylene pouch
around each Dowst toy as it is dropped
on moving web; saddle label completes self-selling package*

Tubular "see-through" packages of 1½-mil polyethylene film, formed continuously from flat roll stock and sealed automatically at both ends at a 50-per-minute clip on a new kind of machine, provide the key to a highly successful new merchandising program launched recently by Dowst Mfg. Co., Chicago.

Originator of die-cast metal toys, this company turns out thousands of miniature cars, airplanes, tractors and other items daily in its new plant, built in 1954.

With the new plastic bags, which are used in conjunction with a metal display rack holding 72 or more of the packages, Dowst has been able to open up increased merchandising opportunities for its products by stimulating impulse sales of the colorful metal toys. Ranging from 15 to 39 cents at retail, with their printed headers highlighting the familiar Tootsietoy name, the toys are especially suited for sale through variety stores, drug stores and food supermarkets.

Move to mechanization

At the outset of this new packaging program, the Tootsietoy items were bagged by hand, production running approximately five completed packages per operator per minute. As the activity expanded, the

need for mechanization became increasingly apparent. Under the direction of G. H. Strobel, Jr., various possible types of equipment were studied and an exhaustive examination was made of several types of packaging films and laminations which might be used for this purpose.

Polyethylene film, in 1½ mil thickness, was selected because it offered an excellent combination of material economy, transparency, satisfactory handling and sealing on the automatic equipment, resistance to aging and cracking, and sufficient durability. The metal toys are relatively heavy and have sharp edges.

At present, the polyethylene roll stock used for the Tootsietoy packages is unprinted. Company identification and retail price of the item or assortment are printed directly on the saddle-type paper label which is stapled to each bag after the packaging operation. Possibly, at a later date, some type of repetitive printed design will also be applied directly to the plastic film, handled in such a manner that it will not block visual inspection of the toys within each bag.

By utilizing a type of packaging equipment which produces its own bags from roll stock, Dowst Mfg. Co., it says, realizes an important saving over prefabricated bags. In addition, the

flat film stock is the key to high speed, semi-automatic handling of the whole packaging operation. The toy items are placed manually on the continuously moving infedding web of polyethylene film and from that point the entire packaging operation is handled automatically.

In effect, the machine progressively wraps the plastic material around each item (or pre-carded group of items, in some instances), forms a continuous lengthwise seal at the top, then cuts off the tube at proper intervals and heat seals each end of the package.

The horizontal design of the machine, permit-

ing the packaging film to be drawn along a flat level surface before it is cupped into tubular form, makes possible manual loading of the items. According to Mr. Strobel, the machine used by Dowst has turned out as many as 2,500 packages per hour on an all-day basis, utilizing only two operators to place the toys in proper position on the moving web of plastic film.

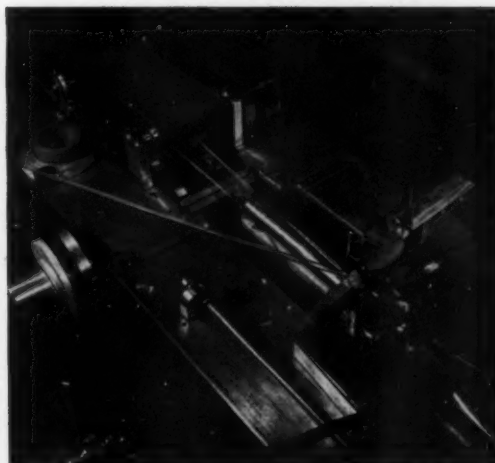
The machine is compact and versatile, lending itself to the packaging of such varied items as toys, shoe laces, combs, tools, pens, hardware items, etc. Among the other products now being packaged automatically on similar equipment, according to

package in film

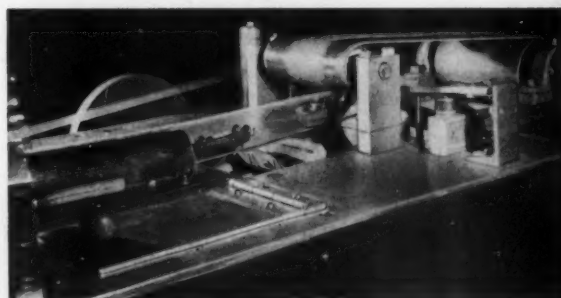


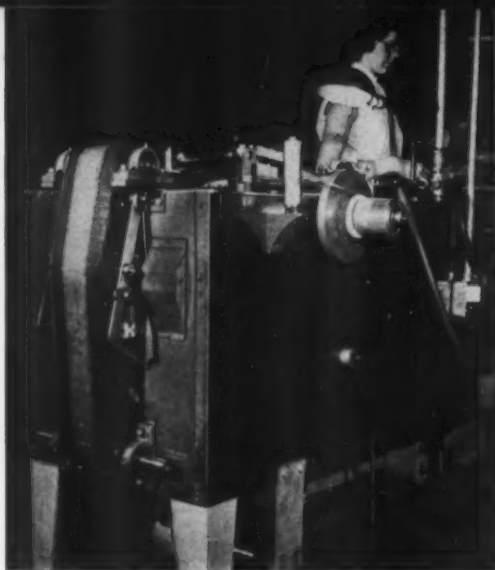
This is the machine that does the job. Web of film fed from roll at right becomes the conveyor belt on which toys are placed at properly spaced intervals. Film is gradually gathered into a tube and top longitudinal seal and trim are made at converging wheels under lamp in left foreground.

Close-up of top-sealing head, with trimmed film being rewound on wheel at left. Note cars traveling in tube of film into compression belt at end of machine where cross-seal and cut-off are made by nichrome wires. Finished pouch then drops down through the machine to return conveyor belt.



Side view of cross-wise seal, from back of machine. Note nichrome element on revolving wheel coming up to make seal and cut-off at point where it meets pressure belt above. Each sealing head carries three nichrome wires: one, exposed in center, for cut-off, and one on each side, under Teflon cover, to seal two adjoining package ends.





End of machine, showing how the pressure belt wraps around revolving sealing-bar mechanisms. Space between the sealing bars may be adjusted to produce packages of different lengths.



Delivery end, showing how finished packages return on lower conveyor belt to starting point and drop in box.

Labels are stapled and hang-up hole punched at the same time in an electrically powered stitching machine controlled by foot pressure.



the machine manufacturers, are smoked fish, baby rattles and lengths of rubber tubing used in milk-dispensing machines. Any heat-sealable material may be used.

Package widths can range from 1 to 5 in. and are changed merely by varying the width of the roll stock used, along with adjustment of the converging guide rails. Package length is varied by adjusting the location of the transverse sealing bars at the end of the machine. The equipment incorporates a bottom conveyor belt which delivers finished packages from the same end of the machine where the supply roll of polyethylene or other suitable heat-sealing material is mounted.

Currently, the Dowst Mfg. Co. is running packages in three different widths and two different lengths on the same machine.

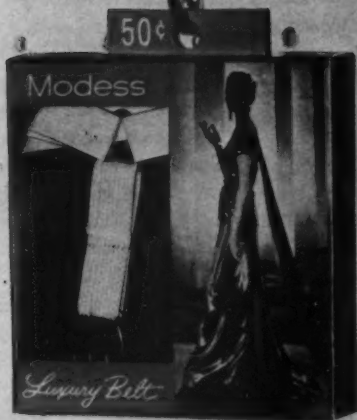
Details of operation

The infeeding web of film moves horizontally across the top of the equipment. Toward the far end of the machine, the outer edges of the web pass between two converging blades or plows which gradually cup the film and bring the two edges together at the top. Before the tube is closed, however, the two operators stationed beside the machine deposit items to be packaged directly on the moving film at proper intervals.

The indexing of the toys on the moving web of film is guided by an indicating chain which moves beneath the web of film. At regular intervals, red lugs on this chain show the operator the location of each end of the finished bag before it is made; thus the operator needs only to center the item or card of items between two of the colored lugs. By means of a clutch arrangement, the indicating chain may be set to serve as a guide for items of different size.

As the moving film is gradually drawn together at the top, forming a tube, the top of the tube passes between two guide rollers and an electrically heated cutting knife simultaneously makes a neat, continuous, heat-sealed seam at this point and cuts off approximately $\frac{1}{4}$ in. of excess material. At this point, the properly spaced [Continued on page 244]

Credits: "Form-A-Bag" packaging machine by Cloud Machine Co., 402 E. North Water St., Chicago 11. "Visqueen" polyethylene film by Plastics Div., The Visking Corp., Terre Haute, Ind. Paper labels by D. F. Keller Co., 3005 W. Franklin Blvd., Chicago. Corrugated shipping boxes by Lewis Paper Products Co., 2711 S. Throop St., Chicago. Metal display racks by Kerr Wire Products Co., 939 N. Cicero Ave., Chicago, and Bussey Products Co., 6000 W. 51 St., Chicago. Stapling machines by Air-E-O Electronics Corp., 327 N. 27 St., Milwaukee.



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Deluxe window cartons manufactured
for Personal Products Corp., Milltown, N. J.

To fit the use

Insect repellent wins friends, influences dealers because the makers found out just how and where the packages are used

Valuable design tips can be found by studying the way consumers use a product. That's not a new principle, certainly, but one that can be easily overlooked. The experience of Tri-R-Sales Corp., Newark, N. J., makers of "2C" insect repellent, is particularly significant in this respect.

Today "2C" is somewhat of a Cinderella product—changed from an amber glass bottle with a drab, black cap and a nondescript brown, buff and apple-green paper label to an ivory-color, silk-screened green squeeze bottle that invites display and pleases consumers because it is unbreakable, has a captive cap, controlled dispensing—even floats if accidentally dropped in the water.

Not only was the old package too plain looking to stimulate impulse sales, but suggested a weak, inexpensive product, when actually the repellent is sold as a premium-quality formula, 2 oz. for \$1.

First formulated for fishermen in Maine, bug-tested from Uganda to Venezuela, "2C," according to its producer, is offered as a superior type of insect repellent.

The problem was to obtain a package that would say, "This is a premium-grade product." The makers of "2C" began with a check list of all the things the package was expected to do. Particular attention was given to the uses of the product and its environment of use. It was decided extra attention to the needs of the user would successfully imply the product possessed out-of-the-ordinary quality.

The new container is polyethylene. A container that won't break in the pocket or when dropped on the ground offers premium value to the user. If a fisherman drops a full bottle in the water, it will float. This recovery feature alone can win a friend for life, especially if fish and bugs are both biting at the same time.

Polyethylene bottles are soft as well as light. Thus

they are easy to carry in a jacket or apron pocket—a feature pleasing to both women and men.

The closure chosen for the container is a hinged-on friction cap, an advantage when a user has one hand busy holding a fishing rod or the handle of a lawn mower. It is an extra convenience to have a closure that can be popped open with a flick of the thumb, as well as captive so that it can't be lost.

The closure has a jet orifice that dispenses the repellent drop by drop or in a dash, according to the amount of squeeze applied to the bottle. This prevents spillage or waste. Incorporation of the non-spill feature was considered an important means by which the "2C" package could say by direct implication: "premium quality."

Users, of course, like a container that is good to look at, that is non-messy, that stays clean, that is easy to identify. Accordingly, the "2C" squeeze bottle employs an attractive ivory-on-green color combination. It invites display in drug, variety, garden, department and sporting-goods stores. The dark green background of the bottle is appropriate to suggest cool relief from insects. The silk-screened white printing and the ivory polyethylene closure imply neatness and efficiency.

Credits: Package design and contract packaging, Pack-It, 109 Monroe St., Newark 5, N. J. Bottle and closure, Royal Mfg. Co., Inc., 200 N. Granite St., Prescott, Ariz. Silk-screen printing, Modern Decorating Co., 155-165 Oxford St., Paterson, N. J.



Everything consumers like—polyethylene bottle that won't break, spill, lose its cap or bulge in pocket. Pop-open closure can be flipped open with one hand. Jet orifice dispenses drop by drop or in a dash. Design invites display, suggests quality product.

Four ways

BAKELITE Plastics help you

Package with a purpose

1 Bottles molded by Imco
Container Corporation,
Kansas City, Mo.

Bottles molded of BAKELITE Brand Polyethylene are very helpful in making sales and savings.

Light weight cuts shipping costs. Unbreakability cuts damage costs. Inertness to most chemicals makes them applicable to a wide variety of contents you may wish to package. And with no limit to rich deep colors or tints or textured surfaces or eye-appealing shapes, it's certainly a beautiful way to catch customers.

(continued on next page)



Package with a purpose

(continued from preceding page)



2 Polyethylene "Flip-Close" bags for "Trigs" are made by Bemis Bro. Bag Company from film supplied by The Visking Corporation, Terre Haute, Ind.

"to get the most out of transparent packaging"

For The William Carter Company, Needham Heights, Mass., that's the purpose of completely repackaging their men's and boys' underwear . . . now in film made of BAKELITE Brand Polyethylene.

William L. Carter, vice-president testifies, "We find that polyethylene lasts longer on the retailer's shelf . . . less danger of inventory spoilage and returns. Also, the polyethylene seems to enhance the quality appeal of the merchandise due to its soft, flexible feeling and appearance . . . an essential characteristic of fine knit underwear."

Our "Soft Goods Packaging" booklet can give you more ideas how you can benefit. Write Dept. QF-105.

3 "Gram-Pac" disposable packages for chemicals, with an inner coating of polyethylene, are made by Dobeckmun Co., Cleveland, Ohio.



**"when highest
purity is required"**

A coating of BAKELITE Brand Polyethylene Resin forms the inner lining of three-layer "Gram-Pac" envelopes developed by Fisher Scientific Company, Pittsburgh 19, Pa.

"The contents are reagents," they explain, "so pure they can be used for research and analytical work. Any contamination would be serious. Hence, inert polyethylene is used as the layer closest to the reagent."

From tiny packages like these to large drums, linings of polyethylene are serving many profitable purposes, and at desirable savings as well.

***Ask your packaging supplier
about...***



(continued on next page)

Package with a purpose

(continued from preceding page)



4 KRENE Cast Vinyl Film offers intriguing benefits... especially for packaged foods, hardware, soft goods and many other products. It's different from other flexible films. Its unusual strength combined with remarkable clarity and gloss is unique. It is easily heat-sealed, easily fabricated by many methods, and offers many other attractive advantages. Why not investigate today? For samples and an informative booklet, write Dept. PY-105.



**"to protect contents and help assure
package air- and moisture-tightness"**

KRENE Cast Vinyl Film serves the purpose for DIF Corporation, Garwood, N. J., as a laminated liner for a foil pouch. According to J. R. O'Meara, vice-president, Ivers-Lee Company, "One of the reasons we particularly *specify* the use of your vinyl film in all of our laminations where vinyl is called for is that excellent heat-sealing quality is offered. Thus, in the millions of unit cream, ointment and liquid packages which we have put on the market we have experienced no sealing problem."

See BAKELITE'S exhibit,
booths #809, 813, 817, 825,
National Plastics Exposition,
June 11-15, 1956, New
York Coliseum, New York.

First in the world of plastics



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So little space

*How to get the most out of the least
with a well-engineered
set-up of conveyors and machinery*

To most people, "automatic packaging" probably brings to mind a vast room with long lines of packages stretching out before the eye. This isn't the case at M. Grumbacher, Inc., New York, manufacturer of paint brushes and artists' materials. The situation is almost exactly the reverse.

Grumbacher's plant is located on Manhattan's crowded West Side, on the fifth floor of a building which the company has long since outgrown. Pending removal to larger quarters, this is the place where all the company's manufacturing, packaging and warehousing must be performed. And, with the fast-increasing popularity of amateur art as a hobby, Grumbacher's business is growing by leaps and bounds—making it essential to be extremely ingenious in getting maximum use of every square foot of available space.

This company's experience might well be studied by other smaller-sized manufacturers, who have always thought that their products and packages were not adaptable to automatic operations—either because production runs were too low, or because space was not available for automatic equipment. Grumbacher has demonstrated that, with clever use of conveyors to make the most of limited area, there is virtually no space into which compact automatic packaging equipment cannot be squeezed.

One of the best examples of Grumbacher's ingenuity is the liquid-filling room. Here, artists' supplies, such as turpentine or ink, are packaged in glass bottles. And, although the room measures only 19 by 25 ft., the job is done completely automatically at a rate of 120 bottles a minute, with only two operators in attendance.

By combining compact filling, capping and labeling machines along a specially designed L-shaped



Small, crowded room, measuring just 19 by 25 ft., can be used efficiently with proper arrangement of automatic equipment for the packaging of Grumbacher's liquid art supplies. Two operators only are needed. Moved along L-shaped line by special narrow conveyors, bottles are (left to right) filled, sealed, capped, labeled and accumulated.

conveyor, Grumbacher is getting what seems to be the very utmost in space utilization. There is even some extra space left along two walls for much-needed storage of finished packages.

The only hand operations are loading empty glass containers onto the beginning of the line and removing the filled and [Continued on page 246]

Credits: Special conveyors, unscrambler and accumulating table by Island Equipment Corp., 27-01 Bridge Plaza N., Long Island City 1, N. Y. Vacuum filler by Karl Kiefer Machine Co., 919 Martin St., Cincinnati 2, Ohio. "Capem" sealing and capping machines by Consolidated Packaging Machinery Corp., 1400 West Ave., Buffalo 13, N. Y. "Label Dri" labeler by New Jersey Machine Corp., 16 St. & Willow Ave., Hoboken, N. J. Tube filler by Arenco Machine Co., 25 W. 43 St., New York 36.

Another space saver in the crowded Grumbacher plant is V-shaped hand packaging line for oil paints in collapsible metal tubes. Four separate lines like this are in operation in one room.



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Lester AUTOMATIC Injection Molding Machines

Lester AUTOMATIC Injection Molding Machines are in fact miniature factories for producing finished plastic packages at a single station. They are self-contained units, equipped to run as individual machines, or in batteries attended by one operator.

Once the mold is installed, the proper temperatures established and the timers set for automatic repetition of the cycle—you can

almost forget them! A variety of automatic controls and safety devices are available to assure you low-cost, round-the-clock continuous production.

If you want assistance in planning your molded plastic packaging production—we'll be happy to work with you—from consultation on the mold to getting your installation running. Give us a call.



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MODERN PACKAGING



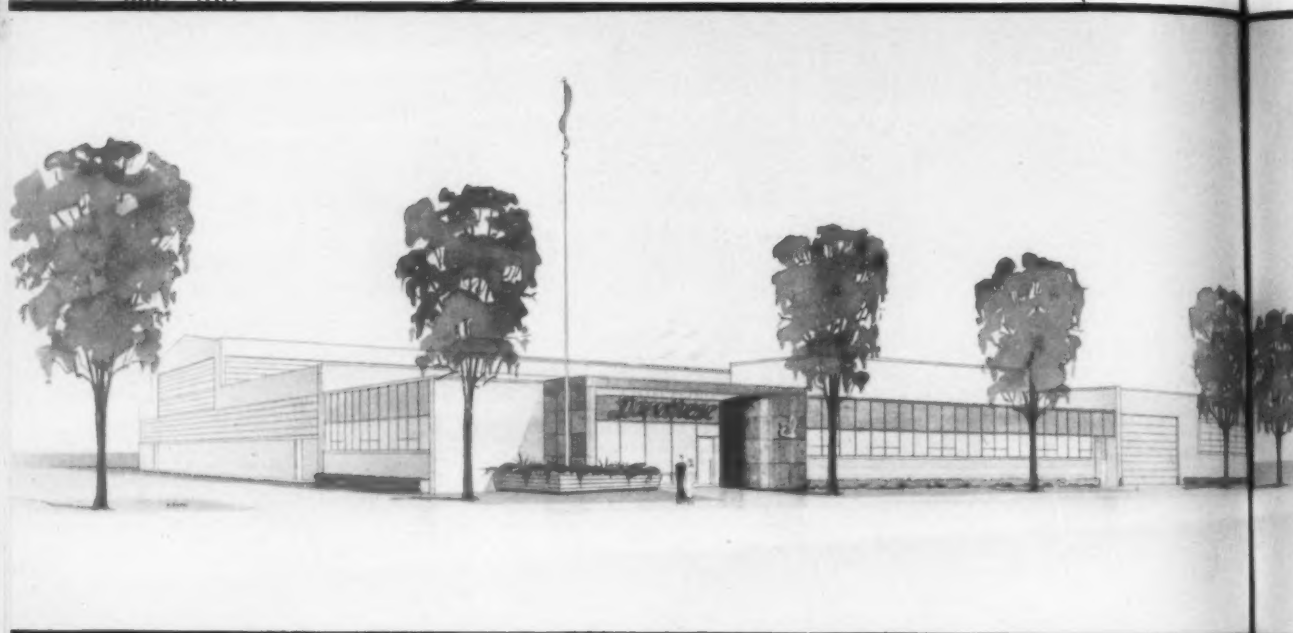
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Durethene

THE POLYETHYLENE FILM
WITH THE "DOUBLE-PLUS" QUALITY

available in bags and sheets from leading Converters everywhere

for better
protection

STRONGEST YOU CAN GET

"STAY-PUT" PRINTING

for better
selling

now, better packages for you—from the WORLD'S LARGEST, MOST MODERN POLYETHYLENE FILM PLANT

YOU can expect direct dividends from the opening of the big, modern plant in which, on June 1, 1956, DURETHENE started turning out the finest Polyethylene Film made.

It contains the very latest in machinery, control methods, laboratory facilities. And, since it will be the largest plant in the world devoted exclusively to Polyethylene Film manufacture, we hope we can now keep ahead of demand for DURETHENE Film—at least for a while!

Those dividends of yours will come in several ways. Vastly expanded production capacity means faster service. And we expect to reach new heights in the consistency of production quality, for which DURETHENE Film is already noted. As fine a laboratory and research setup as you'll ever see promises continually better methods, better control, new Film varieties and applications. Behind all this stands the broad experience and extensive research and engineering facilities of our parent organization, Koppers Company, Inc., major suppliers of plastic resins.

But we think you'll be *especially* interested in something brand new which we can now offer you for better packaging—since our new facilities mean we can make available . . .

Durethene TREATED SHEETING

Converters have long preferred DURETHENE Treated Tubing for its unmatched quality. Now we have not only the space, but special equipment and techniques for making what we are confident is the finest *Treated Sheeting* ever offered. We urge you to get acquainted with each—we're sure your packaging can benefit.

One word more: we're proud of our new plant, of course, but we're even prouder of the basic reason why it had to be built—the continuously increasing demand for DURETHENE Film by leading Packagers and Converters throughout the country, who need and demand the best!

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COMPANY _____

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CITY _____ ZONE _____ STATE _____



Los Angeles today is the third largest city in the country, its rate of growth being stepped up even faster by the great network of freeways, like one in the left foreground, which makes rapid transit of automobile traffic.

The west

Several weeks ago the city of Los Angeles received in fact an honor its more ardent boosters have long claimed in fancy. Their sprawling metropolis—whose city limits signs have been waggishly posted at times as far east as Bismarck, N. D.—was rated officially by the U. S. Bureau of the Census as third largest in the nation in population, having in the last few years passed both Detroit and Philadelphia.

It is perhaps typical of the aggressive, expanding spirit of the West that this rating followed a special census made at the request of Los Angeles, which will play host July 10-12 to the Sixth Western Packaging & Materials Handling Exposition.

Growth—in population, manufacturing and income—has long been one of the yardsticks of success for any area. And Los Angeles and the West Coast can offer an abundance of evidence in this regard.

While the rest of the nation was showing a gain of 10 million civilian population from April, 1950, to

July, 1955, the three Pacific states were racking up more than 2½ million.

Since 1947, manufacturing in California, Oregon and Washington has virtually doubled. Average per capita income for Californians in 1954, the latest year for which figures are available, was \$2,162 in contrast to \$1,770 nationally. The average for all four Far Western states, including Nevada, was \$2,094, higher than that of any other region in the country.

Long-range predictions have had to be revised in the light of these findings. Two years ago it was thought that West Coast population would reach 25

Western industry grows to giant proportions, as national companies establish West Coast manufacturing and packaging plants to compete more favorably in this booming consumer market. This new \$25-million Lever Bros. plant in Los Angeles is now operating at full production.

million by 1975. Recent figures, however, show the area is increasing at the rate of more than half a million people each year. If this continues, as seems probable, the Pacific shore will boast a population of almost 28 million at the century's three-quarter mark.

Industrial expansion

Along with these statistics have come sweeping changes. Western commuters taking a different way home find whole new communities where weeks before there were only rolling ranchlands or fruit orchards. Chamber of Commerce publicists are finding the old superlatives inadequate when a project like Ford's huge assembly plant at Milpitas, Calif.,

is quickly dwarfed by the announcement of an even larger venture for General Motors at nearby Sunnyvale.

The important point for packaging is this: More and more, the West Coast is finding a market for its wares in its own back yard. And these goods are being produced both by local firms and by an ever-increasing number of branch factories of national companies. Many such plants are being located in so-called "industrial parks," well-landscaped areas with sunlit buildings and ample parking, that are an integrated and attractive part of the new communities from which they draw their labor force.

Merchandising and transportation are ever on the minds of Westerners these days. "What will Grace

*As a center of packaging activity, the Western States
are growing even faster than their population;
more and more, the trend is to bring the packaging to the people*



Kelly say," wondered one Los Angeles executive before the wedding at Monte Carlo, "when she finds out you could put all of Monaco in just two of our shopping centers?"

Traffic congestion spawned by the twice-daily flow of workers to their jobs and then home again has led the West to build some of the nation's swiftest and most intricate freeway systems. These, in turn, are admitted to be "revolving headaches" by highway officials who know each new mile of freeway opens up new land for suburban housing projects which, in turn, spew more cars onto the highways.

The freeways have even contributed a new disease to the annals of American medicine. Southern California policemen rushing to unsnarl a recent traffic jam found its cause to be one halted but undamaged car. At its wheel, oblivious to the horns of the hundreds of fuming motorists stacked up behind him, was a man in a trance-like condition. Psychiatrists diagnosed his trouble as "freeway psychosis,"

A new idea in the promotion of package produce, Salinas lettuce growers now furnish printed wrappers and help set up pre-packaging operations in retail centers all over U. S., while building "C7" brand name by intensive local TV promotion.



PHOTO COURTESY LETTUCE, INC.

a state induced by adding the strain of high-speed driving to a too-heavy load of domestic problems.

Despite such psychological deterrents to progress, the West is continuing to build both its processing and its packaging facilities. In just one year recently, 436 major new plants or plant expansions were recorded in the San Francisco Bay area. The largest share of these was in the food and kindred products category, but the next ranking group was for the manufacturers of packaging machines and materials.

Typical of the trend toward expansion of Western packaging branches of national companies is the announcement by General Mills that it will double the size of its Lodi, Calif., plant for the packaging of cereals and cake mixes—a plant that was built only nine years ago. Lever Bros. new \$25-million West Coast plant at Los Angeles is now in full production.

The West now has its own sources of tinplate, which prior to World War II was shipped in from Eastern steel mills. Every major glass-container company now has at least one plant in the West, with eight in the San Francisco area alone.

Western aerosol packaging will be stimulated by Du Pont's construction of a multi-million-dollar plant at Antioch, Calif., to manufacture aerosol propellants for the entire Western area. The plant is scheduled to go on stream about Sept. 1. Paisley Products, Inc., has just acquired its second West Coast adhesives plant through purchase of Dilco Products, Inc., in Redwood City, Calif.

While most national container firms have been expanding or initiating Western factories, several leading firms founded in this area have expanded their operations in the opposite direction. One such company is a distinct innovation—it was started by a group of lettuce growers and shippers to supply their own packaging needs. This firm, Growers Container Corp. of Salinas, Calif., will soon open a branch corrugated carton plant at Jacksonville, Fla.

Growers Container, now producing cartons and flexible film packaging for other industries outside the produce field, was aided in its expansion by a sizable investment from St. Regis Paper Co., which has itself invested heavily in its own Western plants in recent years.

Produce packaging

As might be expected, gains for some segments of the Western packaging industry have been made, to some extent, at the expense of others. The still-mammoth nailed wooden box and crate industry has lost an estimated \$20 million in annual volume to corrugated cartons, which have literally taken over the packaging of Western citrus and lettuce

and are now moving in strongly on celery and strawberries.

Celery, one of the West's big money crops, now is being flash cooled under vacuum in the same manner as lettuce. Where this method is used it eliminates the traditional ice-pack method. More important, from a cost standpoint, the new technique permits the stalks to be packed with cheaper labor in the fields rather than in sheds, where trained help costs more. At the store level, cartoned celery boasts the same advantages as vacuum-cooled lettuce—smaller, easier-handled packages and no mess from melting ice.

The advent of strawberries in colorfully printed master cartons also has dealt a blow to the makers of metal-rimmed veneer baskets, traditionally used with wooden berry boxes. The cartoned strawberries usually are teamed with light-weight molded plastic baskets. These baskets, originated in the West, now are being used in virtually every U. S. berry-producing area.

Manufacturers of corrugated cartons for the produce industry have improved their product considerably in recent years. Board used now is more resistant to moisture. Setting up the cartons in the fields has been speeded and simplified by coating the flaps with adhesive at the factory. Once dry, this latex-based adhesive will adhere only to itself and possesses remarkable holding qualities.

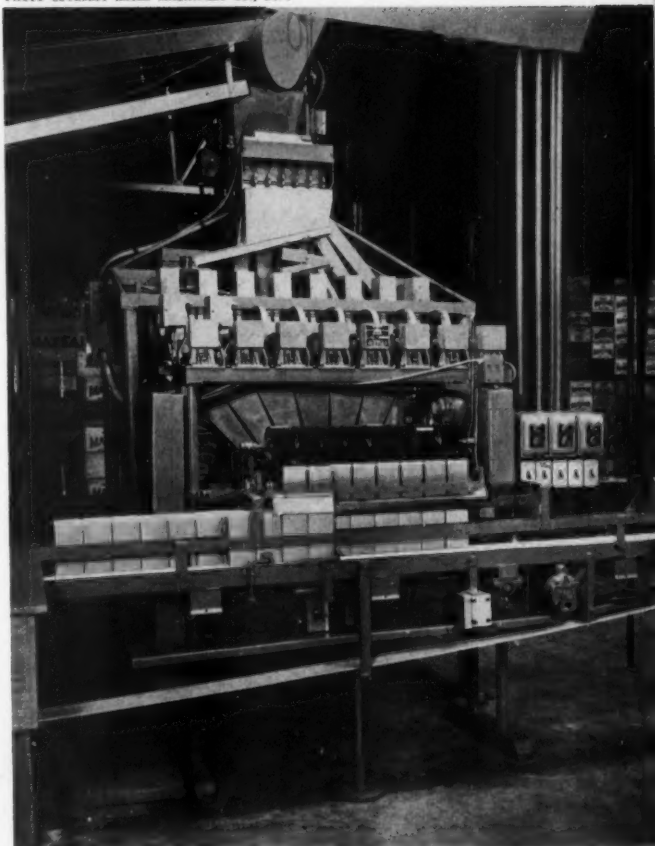
Such improvements in the carton, along with its incontestable cost advantages, apparently have blighted the hopes of those who sought to introduce new produce containers made of laminated, high-wet-strength kraft paper and wood veneer. Production of kraft-veneer sheets, however, has been profitably diverted by some manufacturers into covers for cherry boxes—where the product's freedom from sawdust is a virtue—and into industrial crating and non-package use, such as furniture parts.

Today's citrus packer uses diphenyl-impregnated cartons, eliminating wraps entirely. The smooth-surfaced cartons, along with bulk-fill and shaker machines, have made possible drastic reductions in the amount of labor necessary to man citrus packing sheds.

Substantial quantities of California carrots now go to market minus their green tops. They travel in polyethylene bags and a master carton, eliminating both the weight of the previously shipped tops, the ice formerly used and, to an ever-increasing extent, the sturdy, water-resistant wooden crates which once were a necessity. Grocers say the bagged and topped carrots have longer shelf life and also simplify their produce clean-up.

Pre-packaging also is letting Western celery growers sell more of their crop. Formerly only the best

PHOTO COURTESY EAGLE MACHINERY CO., LTD.



Mechanical innovation is this weigher and carton filler, shown in operation at San Jose plant of Mayfair Packing Co. packing hard-to-handle prunes and apricots in 1-lb. cartons at rate of 70 per minute. Machine frees from four to five workers and saves \$127 every 8 hrs., Mayfair says.

and tallest stalks were picked for shipping and the rest was plowed under. This smaller celery—which always was perfectly edible—now is being trimmed, washed and packaged in cellophane bags and marketed to the housewife as “celery hearts.” It provides an economical alternative for the smaller family which doesn't require a large stalk of celery to meet its needs.

Still another solution to the problem of pre-packaging as closely as possible to the consumer is being tried by a Western lettuce marketing group called Lettuce, Inc., with headquarters at Salinas, Calif.

This band of lettuce shippers, through its joint advertising and marketing fund, is making brand-imprinted cellophane wraps available to supermarket chains and other pre-packing interests, and heavily

promoting the "C7" brand name on radio and TV. Their lettuce is shipped in bulk containers to central points, then trimmed and wrapped before delivery to the stores.

Despite all this progress, there is plenty of room for further growth in California's produce field. John Manners of San Francisco, a member of the executive committee of the Folding Paper Box Assn. of America, estimates that only 15 to 25% of California's packagable food crops have so far been packaged.

Trends in containers

Despite inroads by cartons, the West's wooden box industry continues to hold its market as far as the packaging of soft fruits, apples and tomatoes is concerned. True, some of the more marginal factories have gone out of business. But the remaining plants are mainly doing better than before, since they inherited the business that firms now closed down were handling. At the close of 1955, the wood-

en box business was up 6.64% over that of 1954.

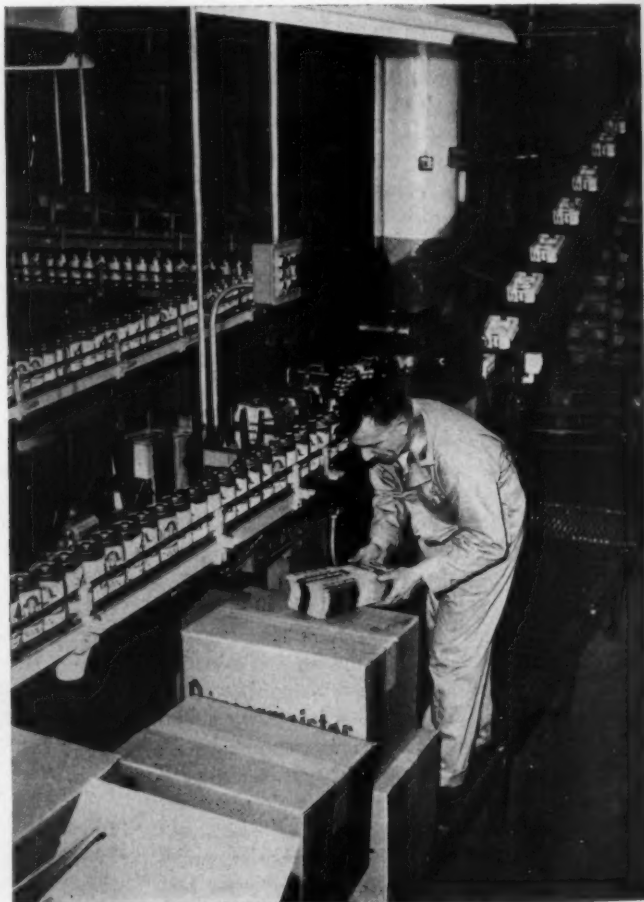
Spurred by competition, the wooden boxmakers have adopted many cost-cutting materials-handling techniques. Through this and the development of lighter parts in keeping with the trend to smaller produce containers they have managed, according to some produce industry observers, to keep their prices remarkably low in view of the unprecedented demand for lumber by the housing boom.

In other phases of the Western container picture some expected increases have not materialized. Demand for soft-drink cans, while considerably above the level of two years ago, has varied greatly in different areas. One major region, according to the Department of Commerce, has encountered disappointing reception for soda in cans, while in still another can makers reported this use to be their strongest growth item.

As might be expected in the light of the region's growth, heavier demand is being felt for cans for beer, fruits and vegetables, [Continued on page 166]



Rapid pace of Western packaging development is illustrated by this Twin-Pak carrier for new quart cans of Burgermeister beer. Both the carrier and the machine that forms it—taking up just eight lineal feet at the end of the high-speed can line—were designed and placed in operation in just six weeks. Carton and machine by Andre Paper Box Co.; cans by American Can Co.



Piggy-back on a window

Two spots of glue provide Coast Packing Co. with a combination package for sausage links and bacon in which both window flaps may be lifted for inspection



Combined, the two packages are firmly glued together, the smaller on the flap of the larger—yet both window flaps may be raised to view contents. Separated, the components of this two-product “deal” package are the conventional wrap-cartons in which the products are regularly marketed.

A combination package of unusual shopper appeal is the “Piggy-Pak” just introduced by the Coast Packing Co., Los Angeles, to encourage purchase of both its pork sausage links and sliced bacon marketed under the “Ol’ Smokey” brand name.

Both of these products are regularly marketed in the patented type of semi-rigid wrap-carton which has a “window with a flap” on its top surface. The waxed paperboard which forms the rigid part of the package is die cut around three sides of the window opening and scored on the fourth, so that it will lift up for a view of the contents through the transparent window film.

In studying the possibilities of a combination package, it was found that the smaller, 8-oz. sausage

package would fit very neatly within the window-flap area of the 1-lb. bacon package. It was, therefore, a simple matter to apply two spots of a special, odorless glue to the under side of the sausage package and attach it to the top of the bacon window flap.

Thus, the shopper finds a combination package in which it is easy and intriguing to lift both flaps and examine the quality of the sausage and bacon, and Coast Packing achieves its objective of selling two products at once. [Continued on page 168]

Credit: Mullinix “Peek-A-Boo” cartons by Western Waxed Paper Div., Crown Zellerbach Corp., 2101 Williams St., San Leandro, Calif.



Western ♦ Packaging ♦ Pageant V

- 1 A combination of polyethylene bag and folding carton affords over-all protection against dehydration, yet allows inspection of the canes of bare-root rose plants sold in attractive display by Armstrong Nurseries, Ontario, Calif. The plastic bag covers the entire plant, while the carton encloses the roots. Carton, Fibreboard Products, Inc., San Francisco.
- 2 Carry cartons for dinner wines by Opici Winery, Alta Loma, Calif., were adopted to create impulse sales after a survey indicated that "people like to drink wine, but seldom think to buy it" on impulse. Carrier holds four 12.8-oz. bottles. Carton, Los Angeles Carton Div., Robert Gair Co., Inc., New York. Bottles, Owens-Illinois Glass Co., Toledo. Design, Vision Art Studios, Paterson, N. J.
- 3 Appetite appeal is achieved for Mexican-style Enchilada Dinners by Maclean's Frozen Foods, Inc., Los Angeles, with this gay, full-color, south-of-the-border-style overwrap. Wrap, Western Waxed Paper Div., Crown Zellerbach Corp., San Leandro.
- 4 Introduction of this five-color printed cellophane-overwrapped package for Party Filberts sold by Hudson House, Inc., Portland, Ore., has prompted national distribution of the product. Overwrap, The Dobeckmun Co., Cleveland, Ohio.
- 5 High quality of the Deluxe line of shoe polishes by Cavalier of California is reflected in these new jars, lithographed screw caps and embossed foil cartons. Jars, Glass Containers Corp., Hayward,

3



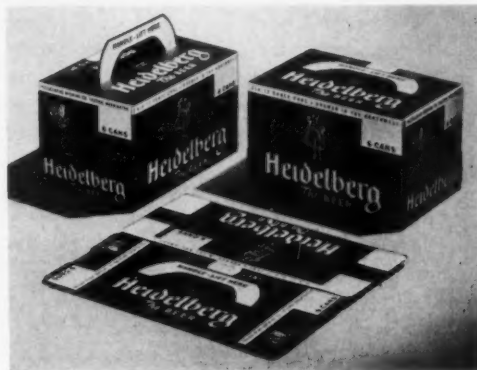
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7



8



9

ant Western ♦ Packaging ♦ Pageant

Calif. Closures, Phoenix Metal Cap Co., Chicago.
Cartons, Andre Paper Box Co., San Francisco.

- 6** New 8- and 28-oz. no-deposit, no-return bottles introduced by Calso Water Co., San Francisco, have reportedly sharply increased sales. Bottles, Glass Containers Corp., Hayward, Calif. Foil labels, Stecher-Traung Lithograph Corp., Rochester, N.Y.

- 7** Success of these new appetite-appeal waxed paper wrappers for Snowflake brand bread has led Snowflake Bakery Corp., Honolulu, to adopt similar ones for its other breads. The full-color wraps show mouth-watering serving suggestions. Wraps, Western Waxed Paper Div., Crown Zellerbach Corp., San Leandro.

- 8** Labels for private-mold bottles of Guild California wines have distinctive arched shape which is repeated on shrink-type closures and shipping cases. Design, Walter Landor & Associates, San Francisco. Bottles, Ball Bros. Co., Inc., Oakland. Labels, Lehmann Printing & Lithographing Co., San Francisco. Celon closures, Latchford Marble Closure Co., Fresno; Du Pont Cel-O-Seal closures, Crown Cork & Seal Co. and Armstrong Cork Co., both of San Francisco. Shipping cases, Container Corp. of America, Chicago, and Ball Bros.

- 9** Heidelberg Brewing Co., Tacoma, Wash., now uses a take-home carton with carrying handle for packing six 12-oz. cans of beer. Carry cartons, Fibreboard Products, Inc., San Francisco.

Shipping electronic brains

A scientific approach to problems of cushioning delicate data-reduction machines has minimized costly damages and delays for Los Angeles manufacturer

The constantly accelerating technological race between the United States and Russia, with a corresponding emphasis by non-defense industry upon highly scientific and complicated design, research, automation and testing techniques, has created a tremendous dependence upon automatic data-reduction equipment. Many entire engineering and development programs today are geared to the delivery dates of these intricate, electro-mechanical devices, for which Los Angeles has become a production center.

Proper packaging for this specialized type of electronic equipment has become far more important than the casual observer might realize.

On more than one occasion, a data-reduction machine that had been damaged in shipment because of faulty packaging has delayed an entire missile test operation while the equipment was returned to the factory for repairs. In the interim, proving-ground facilities and crews of engineers and technicians were placed on a standby status. Cost of such a delay can run into the hundreds of thousands of dollars.

Benson-Lehner Corp., Los Angeles, one of the West's prime developers and manufacturers of automatic data-reduction devices, fought this packaging problem for a period of nearly two years before finding a satisfactory solution.

Floating suspension is provided by fitting pre-formed foam rubber blocks at all eight corners of the cabinet.





Prefabricated crate is lowered over the assembly. Note how wood bracing has been built out at the right side of base to protect the projecting blower assembly; similar bracing is employed at the top.

In 1953, Benson-Lehner sold more than \$1,000,000 worth of data-process equipment. Shipping damage amounted to \$40,000. In 1954, the volume of business doubled, yet shipping losses were kept to less than \$500. Current volume is over \$3,000,000 a year, with only negligible shipping damage.

The product and problem

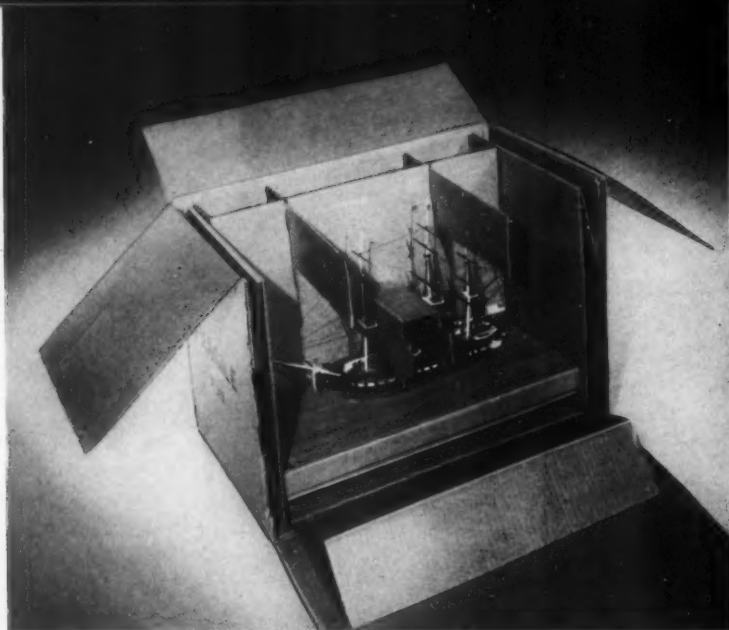
The company's equipment is designed in building-block form so that separate units can be combined to provide a wide variety of systems to suit changing needs. There are four basic units: two produce data, the others accept, evaluate and otherwise process this data into [Continued on page 157]

Credits: Contract packaging by Specification Packaging Engineering Corp., 6869 Tujunga Ave., North Hollywood, Calif., using "Moltex" foam-rubber cushioning by American Latex Products Corp., 3341 W. El Segundo Blvd., Hawthorne, Calif.; "Kimpak" creped cellulose wadding by Kimberly-Clark Corp., Neenah, Wis.; "Tuflex" cellulose fibre felt by Wood Conversion Co., St. Paul 1, Minn., and "Plastin" laminated barrier material by Plastic Film Corp., Plainfield, Conn.

PHOTOS COURTESY SPECIFICATIONS PEG. ENG. CORP.



Waterproof paper is stapled to top of crate before lid is nailed on and steel strapped.



Fragile model of U.S.S. Constitution is embedded in corrugated platform, ends of which are reverse folded under in a manner to form cushioning beneath product, while slotted panels brace and protect in other direction.

Suspended in corrugated

Revell's experience in shipping a delicate ship model demonstrates the effectiveness of board used in a simple, but well-engineered slotted construction

A top ship model may require as much packaging care as a delicate instrument. When Revell, Inc., Venice, Calif., manufacturer of plastic make-it-yourself toy kits, was looking for a way to package a fragile model of the original U.S.S. Constitution, for shipment fully assembled, it first approached companies that package fine machine parts.

But Revell discovered that this kind of packaging protection was much too expensive and decided to do the job with corrugated material alone.

The shipping container which was adopted has ingenious interior packing which protects the hull and deck, its free-swinging lifeboats and three masts, one of which rises 9 in. above the deck.

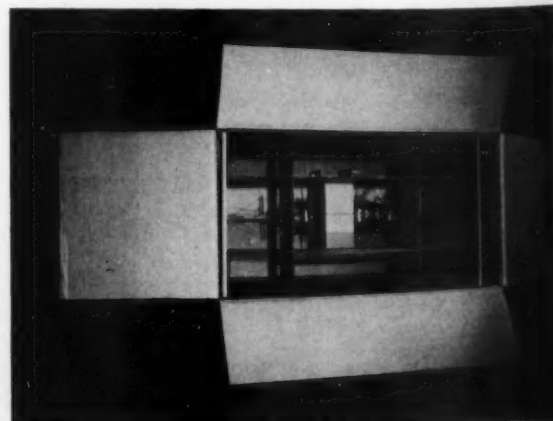
The ship model is embedded in a platform of corrugated, the ends of which are reverse folded under the platform. On both sides, another fold extends to form cushioning both beneath the product and at the sides. Two interior panels, slotted at the top and bottom, fit the length of the container and support the cushioning at each end. And two cross panels, for extra protection to the masts, fit into slots at the top of the interior panels.

A small, die-cut sheet of corrugated, folded between the main masts, fits closely over the rails of

the deck to protect the deck surface and hold the ship upright. It is attached to the interior panels by die-cut tabs which fit into the bottom slots.

Credit: Corrugated container by Los Angeles Corrugated Box Div., Robert Gair Co., 155 E. 44 St., New York 17.

Interior panels fit length of container. Cross panels protect masts. Small, die-cut corrugated sheet, folded between masts, fits over rail to protect deck and hold ship firmly upright.



Q: What package caser cuts manhours up to 70%?



"Sure-Way" Caser at Western Frozen Foods, Watsonville, Calif.

A: The amazing

SURE-WAY PACKAGE CASER

TYPICAL USERS

American Home Foods, Inc. — Spaghetti dinner
The Andrew Jergens Company — Soap bars
C&H Sugar Refining Corporation — Sugar
General Mills, Inc. — Prepared mixes
Libby McNeill & Libby — Frozen foods
Mariani Frozen Foods — Frozen strawberries
M. J. B. Co. — Rice and tea
Rosenberg Bros. & Co., Inc. — Prunes
Sun Maid Raisin Growers of California — Raisins
West Coast Growers & Packers, Inc. — Raisins
Patterson Frozen Foods — Frozen foods
Cedergreen Frozen Pack Corp. — Frozen foods
Western Frozen Foods — Frozen foods

...and here's why "When we installed our 'Sure-Way' Caser a year ago, we were able to re-assign seven people to other jobs who had previously worked on our manual casing line," says O. L. Moulthrop, Western's vice president in charge of production.

With the "Sure-Way," a single operator positions the empty case—the rest is automatic: conveying and aligning packages, elevating and tiering, loading case and lowering to the discharge belt, ready for sealing. All this at speeds up to 240 packages a minute! Cases virtually any product in a rigid or semi-rigid container, or product that takes a rigid shape. Many other cost-saving features are exclusive with the versatile "Sure-Way." Write today for all the facts.

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—just off the press, fully describes the "Sure-Way" Caser—mail today!



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☐ Please send me your Bulletin on the "Sure-Way" Package Caser.

☐ Have your representative call.

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Product(s)



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6TH

Western Show

*Packaging interest of 11 Western States
will focus on biennial*

*Western Packaging & Materials Handling
Exposition in Los Angeles'*

Pan Pacific Auditorium July 10 to 12

Back in Los Angeles for the first time since 1952, the Western Packaging & Materials Handling Exposition will have its sixth renewal in the Pan Pacific Auditorium—a new location—on July 10-12. The show, which draws attendance from the 11 states west of the Rockies and which centers on the special packaging interests of Western industry and agriculture, is now staged every other year, with the site alternating between San Francisco and Los Angeles. Both national and Western packaging-supply firms are among the exhibitors.

Original exhibit space in the auditorium was sold

1954 Show, in San Francisco, attracted nearly 9,000 and had 153 exhibitors. Biennial show alternates between San Francisco and Los Angeles.



out as early as January and additional floor area has been added to accommodate the growing list of companies wishing to participate in the exposition. At press time, 137 exhibitors had signed up for 147 booths, according to Clapp & Poliak, Inc., who sponsor and manage the show. Attendance is expected to surpass the approximately 9,000 who visited each of the last two shows.

An innovation this year will be the elimination of all conferences, clinics or other formal meetings, in order that those attending the Western Show will be able to devote their full attention to the new equipment and materials on exhibition. The only collateral meetings scheduled will be essentially social in nature, such as a luncheon planned by the Western Packaging Assn.

The exposition will open at 1 p.m. on all three days, and on Tuesday, July 10, and Thursday, July 12, it will close at 6 p.m. On Wednesday, exhibit hours will be extended until 10 p.m.

The Western exposition is conducted with the assistance of a Board of Sponsors, whose members consist of 33 industry executives.

This year's board members are: K. K. Dean, *Good Packaging*, general chairman; P. N. Baxter, *Interchemical Corp.*; D. Blackwood, *Peter D. Bowley & Associates*; T. E. Bruffy, *Flexible Packaging Div., Growers Container Corp.*; F. L. Carley, *Guardian Paper Co.*; O. D. Carlson, *Modern Packages, Inc.*; A. Donald, *King Sales & Engineering Co.*; T. E. Ellison, *Biner-Ellison Machinery Corp.*; J. C. Fischer, *Sherman Paper Products Co. of Calif.*; T. A. Fitch, *Irving G. King & Co.*; G. N. Glendenning, *Canning Machinery Div., Food Machinery & Chemical Corp.*; J. C. Hale, *James C. Hale & Co.*; P. L. Heguy, *New Jersey Machine Corp.*; H. Hicks, *Fibreboard Products, Inc.*; Kenneth G. Houts, *Marathon Corp.*; W. H. Jaenicke, *Mailler Searles, Inc.*; O. L. Jenkins, *E. C. Buehrer Associates, Inc.*; A. Johnson, *Zellerbach Paper Co.*; C. E. Jones, *Western Package Products Co.*; R. Jorgenson, *Pacific Coast Foil Co.*; E. J. Keefe, Jr., *Industrial Wadding Div., Kimberly-Clark Corp.*; E. L. Kennedy, *Southern California Plastic Co.*; W. H. McCallum, *H. S. Crocker Co.*; B. B. Miller, *B. B. Miller Co.*; M. P. Mohr, *Ames Harris Neville Co.*; F. L. Murphy, *National Starch Products, Inc.*; J. B. Post, *Films Div., Goodyear Tire & Rubber Co.*; J. R. Queen, *Globe Hoist Co.*; F. A. Smith, *Kaiser Aluminum & Chemical Sales, Inc.*; S. Tilden, *Arabol Mfg. Co.*; F. Todt, *Fred Todt Co.*; D. Tudor, *The Flintkote Co.*, and K. Wuestenfeld, *Western Waxed Paper Div., Crown Zellerbach Corp.*

Advance registration cards are available from Clapp & Poliak, Inc., 341 Madison Ave., New York 17, or 681 Market St., San Francisco 5.

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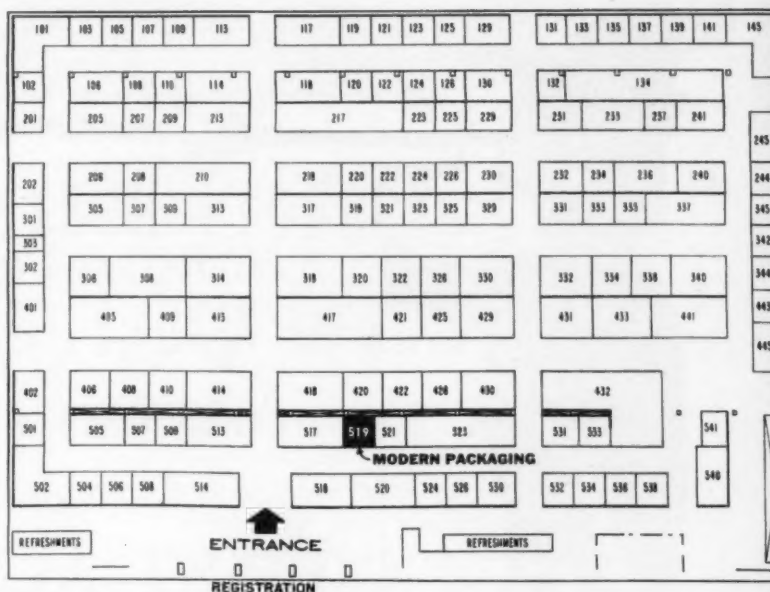
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Pan Pacific Auditorium, Los Angeles, July 10-12, 1956

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Celanese announces
**EXPANDED
PRODUCTION**
of
**CAST ACETATE
SHEETING**

*to meet the great demand
for this premium material*

The first units of the new Celanese cast sheeting plant at Belvidere, N. J., are now in full scale operation. It will be welcome news to many manufacturers and fabricators.

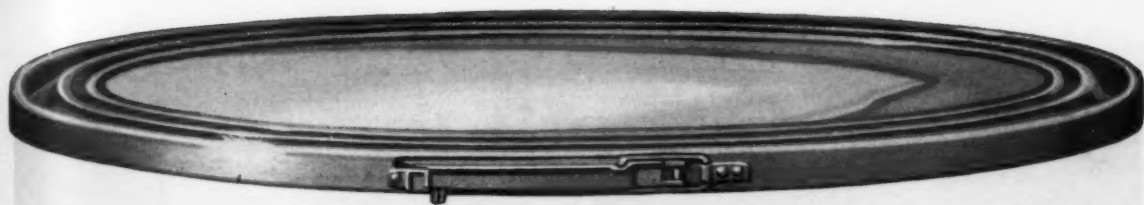
In recent years, supply of Celanese cast acetate has been hard put to keep up with increasing demands—because there's no substitute for its crystal clarity and surface perfection.

Cast acetate sheeting produces formed and fabricated rigid containers of great beauty and showmanship . . . the finest presentation folders, wallets and chart covers . . . striking Christmas cards . . . millions of movie cartoon cells . . . store window shades, and many other products with exacting requirements.

Celanese' new facilities will produce both cast

sheeting, in thicknesses .003" to 0.020", and lightweight cast acetate film from .0007" to .002". These materials, as well as extruded acetate sheeting and film, are available directly from Celanese or through a nation-wide organization of jobbers. Write for complete information. Celanese Corporation of America, Plastics Division, Dept. 108-F, 290 Ferry St., Newark 5, N. J. Canadian affiliate, Canadian Chemical Co., Limited, Montreal, Toronto and Vancouver.

Celanese
Celanese® *plastics*



The Best Dressed Products "Wear" Rheem Fibre Drums



A customer looks first at your package, and then at your product. And, as you well know, his mind is often made up before the second look. That's why choice of containers is so important—why Rheem Fibre Drums may make just the good first impression your product needs and rates.

For only pennies more per drum, eye-catching sales messages can go wherever your product goes. Any design, in any number of colors, can be silk screened right on Rheem Fibre Drums. Or you may choose complete wraparound posters or distinctive identification labels to give your entire product line a family resemblance.

There are still more advantages:

Better Product Protection—heavy-duty kraft linerboard bodies, reinforced fibre or metal tops and bottoms.

Easier to Handle—lightweight—varied diameters for space-saving nesting.

Product-Planned Linings, coatings and barriers.

Wide Selection—all-fibre and fibre-metal drums in 1- to 60-gallon sizes.

Nationwide Availability—through eight Rheem sales offices and warehouses.

You can rely on



to solve your packaging problems

For expert packaging counsel, write the Rheem office nearest you:

477 Madison Ave., New York 22, N.Y.	4361 Firestone Blvd., South Gate, Calif.	1025 Lockwood Dr., Houston, Texas	Highway 25, 1701 W. Edgar Rd., Linden, N. J.
801 Chesley Ave., Richmond, Calif.	5001 Jefferson Hwy., New Orleans, La.	7600 Kedzie Ave., Chicago 29, Ill.	Box 6718, Sparrows Point 19, Md.

FIBRE DRUMS, STEEL DRUMS AND PAILS, SPECIAL EQUIPMENT CONTAINERS

Modern motif for liquors



Smartly shaped clear-glass decanter bottles have black wood screw closures. Desert motif is reinforced visually by pyramid shape of main labels, on textured paper that contrasts with glossy "seal" labels below.

A new San Francisco brand of vodka and gin comes in smart matched decanters and takes its design and promotion cue from the name, Sahara Dry

Sharply tuned to current tastes and trends are the matching decanter bottles now being introduced in San Francisco for gin and vodka under a new brand name, Sahara Dry.

The modern decanter set, with straight tapered bottles that are identical except for the labels, takes cognizance of the rapidly rising popularity of vodka as an alternative to gin in mixed drinks and gives the home bartender an attractive way to offer guests their choice.

The vodka market has become highly competitive and the originators of Sahara Dry, Stewart & Co. of San Francisco, felt that their success with a new

brand would depend upon distinctive package design and promotion. Accordingly, the company's advertising agency, Carson-Roberts, Inc., conducted a study in the San Francisco and Los Angeles areas which resulted in three conclusions: (1) bottle design in the gin and vodka categories was highly stereotyped; (2) no attempt was being made "visually" to sell the merchandise once it was on the shelves and (3) there was no visual tie-in between brand name and the shape of the bottle or decanter.

The Sahara Dry design took its cue from the brand name, which was selected to dramatize the



Mobile display incorporates a representation of the decanter itself, a spinning sheik and the Sahara Dry camel. The decanted liquors are highly competitive, priced in San Francisco at \$3.98 a fifth.

current consumer demand for "dryness" in gin and vodka drinks particularly. This led to the pyramid shape of the well-proportioned clear-glass bottles; the pyramid shape of the main label; the date-tree motif that decorates the label; the advertising slogan, "It took ages to make SAHARA Dry—there's nothing drier!" and the amusing illustrations and mobile displays showing a happy and relaxed desert sheik, cocktail in hand, jouncing along on his camel.

The bottles are topped by a smart black wood closure with a reverse taper. The main pyramid-shaped labels on both products are identical, printed in black and gold on a fine buff textured stock, except for the word "Dry," which appears in blue for gin and red for vodka. The principal product distinction is on a lower seal-edged oval label of coated stock, printed in gloss inks, with a pyramid design motif and the designation "Gin" or "Vodka."

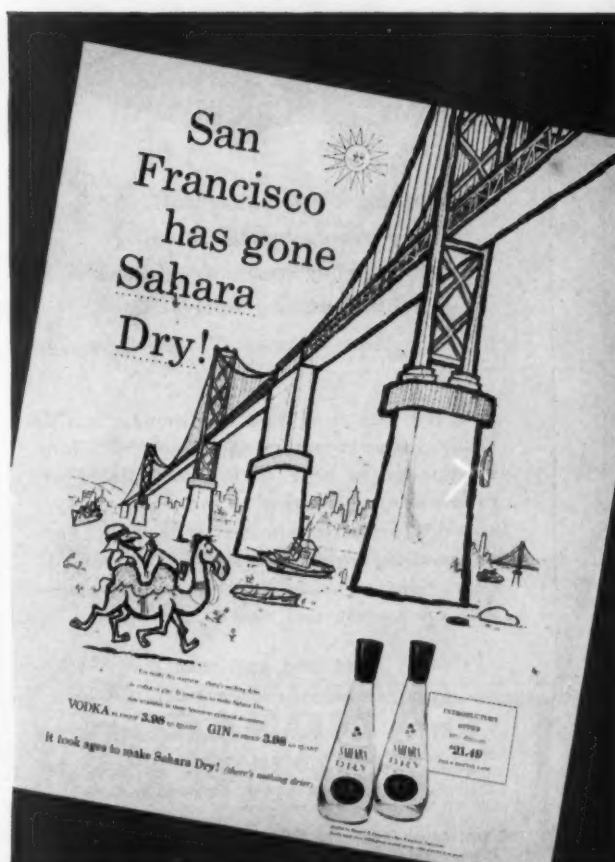
For all this smart design, the consumer pays no premium. Sahara Dry gin and vodka are retailing for the moderate price of \$3.98 per fifth in San Francisco and are expected to be competitive with all popular brands in all markets.

Two important dealer aids, each following the theme of the bottles, have been developed. A hanging mobile incorporates the pyramid-shaped bottle, a spinning sheik and the Sahara Dry camel. Tent cards feature graphic illustrations of these three elements, accompanied by whimsical copy.

Sahara Dry vodka and gin were introduced first in the San Francisco-Oakland area and will shortly be presented nationally.

The San Francisco campaign also consists of a series of teaser ads and a full-page announcement in local media. In addition, there was another full-page ad (illustrated) with a strong local slant. In each area where the Sahara Dry products will be introduced, the teasers and general ad will be run, as well as a specially prepared ad themed to the particular locale.

Credits: Decanter bottles by Owens-Illinois Glass Co., P.O. Box 1035, Toledo 1, Ohio. Labels by Carter & Galantin, 1921 S. Flower, Los Angeles. Wood closures by W. R. Goeringer, 1933 Maple Ave., Los Angeles. Mobile display by Gangi Studios, 1811 S. Hope, Los Angeles.



Local appeal with an amusing and characteristic touch is used in this full-page newspaper ad that promoted the new brand in the introductory city. Similar local slants will be used in other big cities as the product goes national.

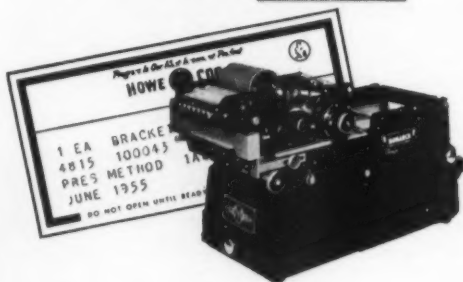
one
*
manufacturer

saves

\$117,413

in one year with an
imprinting machine

Tickopres



- reduces direct labor costs 67%
- prevents waste of costly manufacturing space • cuts down label handling operations

* Name on request

You, too, can save time and money, avoid costly delays in imprinting if TICKOPRES can be applied to your work. TICKOPRES, the revolutionary imprinting machine easily, speedily produces printers' style work. For information, enclose samples of your present imprinting, or an outline of your problem with the coupon and mail to us.

TEAR OUT AND MAIL

The MONARCH

MARKING SYSTEM COMPANY

216 South Torrence Street, Dayton 3, Ohio

Without cost or obligation to us — send information about Tickopres. — Show us how we can save imprinting time and money.

NAME TITLE

COMPANY

STREET

CITY ZONE STATE

MP-654

When 1 oz. package
overweights can mean
\$ \$ lost... there's no
substitute for



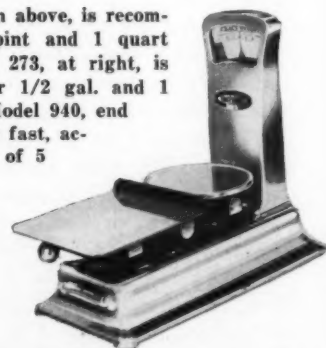
... Exact Weight

Many products, such as cartoned ice cream, are sold on a "large volume—small profit" basis. Overweight packages in a day's production can wipe out your profit.

EXACT WEIGHT Scales checkweigh your package production accurately and quickly—they are used extensively by dairies to control all their packaged products.

EXACT WEIGHT'S easily read dial leaves no margin for error. On Model 103, shown above, one inch travel equals one ounce. Adjustable damping action and short lever movement quickly stop pointer at Exact Weight for a fast and accurate reading.

Model 103, shown above, is recommended for 1 pint and 1 quart packages. Model 273, at right, is recommended for 1/2 gal. and 1 gal. packages. Model 940, end tower model, for fast, accurate weighing of 5 gal. containers.



Exact Weight
Scales
Better quality control
Better cost control

THE EXACT WEIGHT SCALE COMPANY

914 W. Fifth Avenue, Columbus 8, Ohio

In Canada: P. O. Box 179, Station 5, Toronto 18, Ont.



FOR **Caulking**
COMPOUND USE...

CLEVELAND CONTAINERS

This caulking gun cartridge is a spirally wound cylindrical tube, designed to provide the strength and rigidity necessary to store and dispense caulking compounds.

Made of high test chipboard, this container is lined with a greaseproof barrier to prevent leakage.

The top is of bright tin plate on which a firm, yet flexible plastic spout is fitted for dispensing the compound. Can be used with all makes of caulk guns.

The bottom metal insert cap, which is shipped separately, serves as the plunger which pushes the compound through the plastic spout. This cap may be furnished plain or embossed to identify the color of the caulk compound.

This container can be furnished with labels attached, or preprinted labels spiralled on, if desired.

Contact our nearest plant for further details!

INVESTIGATE THE
Complete Line
of CLEVELAND CONTAINERS



THE
CLEVELAND CONTAINER
COMPANY

6201 BARBERTON AVE., CLEVELAND 2, OHIO

PLANTS AND SALES OFFICES:
CLEVELAND
DETROIT
CHICAGO
MEMPHIS
LOS ANGELES
PLYMOUTH, WIS.
JAMESBURG, N. J.
OGDENSBURG, N. Y.

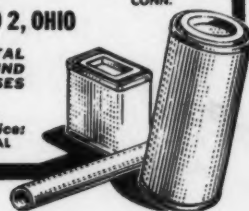
ABRASIVE DIVISION
CLEVELAND

• ALL-FIBRE CANS • COMBINATION METAL AND PAPER CANS • SPIRALLY WOUND TUBES AND CORES FOR ALL PURPOSES

CLEVELAND CONTAINER CANADA, LTD.
Plants & Sales Offices:
TORONTO AND PRESCOTT, ONT.

SALES OFFICES:
NEW YORK CITY
WASHINGTON, D. C.
ROCHESTER, N. Y.
WEST HARTFORD, CONN.

Sales Office:
MONTREAL





Like country butter, Curries' ice cream is heaped over top of gallon container (top, center), covered with cellophane sheets; lid for storage is on base. Saran window in lids of sherbet containers (center, below) similarly gives view of contents. Note "mile-high" cone trademark.

Innovations in ice cream

Curries stores dramatize "Mile-Hi" servings by letting ice cream overflow tops of gallon cans; saran film provides a window in lids of sherbet packages

In the West, where everything's big, advertising claims often become a competition in superlatives. Last fall, the Curries ice-cream chain in Southern California, famous for their generous portions of ice cream, undertook to popularize their stores as the home of "Quality and Value—a 'Mile-Hi'!" This led to a new packaging program for carry-out ice cream, with several unusual features.

The "Mile-Hi" concept is carried throughout the chain from floor to ceiling. "Mile-Hi" sundaes and sodas are featured on menus a "Mile-Hi." Large electrical pylons in the shape of "Mile-Hi" cones are the exterior "trademarks" for the chain.

The new trademark—a gigantic cone with a tremendous peak of ice cream—was adapted to the new packages. After months of preliminary research with the container supplier, the final Curries packages were approved, tested and put into production in April. Colors for the packages are tied in with those used in the decoration of the stores.

The new Curries ice-cream and sherbet containers, paperboard with a special vinyl coating, are round in shape, both for convenience and added flavor. The round shape practically compels the consumer to "spoon" the ice cream from the package,

thus allowing greater richness, better texture and smoother eating, Curries believes.

A unique feature of the sherbet containers is a saran window which enables the customer to see the smooth quality of Curries' special sherbet.

Another innovation in the new packaging program is the "heaped-up" half-gallon which has a large mound of ice cream actually overflowing the top of the package. The overflow is covered with heavy cellophane. After the consumer has spooned out a few servings of ice cream, a storage cover included with the half-gallon package, attached to the bottom, can be placed on top for storage.

Each of the packages has a vinyl plastic coating made of a special mixture of resins. This scientific plastic coating on the inner and outer surfaces of the package literally seals the flavor in and seals unwanted moisture and refrigerator odors out.

Although in effect for only a few months, the dramatizing of the "Mile-Hi" concept already is credited with a "tremendous" increase in sales.

Credits: Vinyl-coated containers by Sealright Co., Inc., Fulton, N. Y. Saran film by Dow Chemical Co., Midland, Mich. Cellophane by DuPont.

Woodman presents another great PROFIT-MAKER for Manufacturers!

The PLUR-A-MATIC Net Weigher

● ACCURACY ● FLEXIBILITY ● SPEED

WOODMAN'S new PLUR-A-MATIC makes every second count! One to four scales keep production rolling at high speed . . . give you a weight range from two to sixteen ounces single shot—with quick, easy change-over of product, bag weight and size! *So accurate, it eliminates the need for check weighing each bag!* Let your WOODMAN man tell you at no obligation how this triumph of WOODMAN research will make money for you.

PACKAGING high density products? Woodman's PLUR-A-MATIC is made for them! adapts to the Vibra Wheel Bag Filler for semi-automatic filling, as shown here, the Air-Weigh-Matic Automatic bag filler, and the Vibra Belt box and can filler—fits every phase of your packaging operation.

*Your Woodman Man is
a good man to know!*



The
WOODMAN
Company

Home Office: Decatur, Georgia. Direct Sales
& Service Offices in Portland, Ft. Worth,
New York, Boston, Cleveland, Los Angeles, Chicago,
Kansas City, Detroit, San Francisco, Philadelphia,
Buffalo, St. Louis, Montreal . . . soon in Toronto, Canada

Sea treat from the Northwest

With a new method of brine freezing, a polyethylene bag permits shipment to Eastern markets of whole cooked Dungeness crab, famed delicacy of the North Coast

A Western packaging development, attracting national attention these days, brings a typically Western seafood delicacy for the first time to Eastern cities. Dungeness crab, a product of the North Pacific Coast long available in fresh markets of that area, now is going to market in major cities of the Atlantic Seaboard, cooked, frozen whole and packaged in individual, printed polyethylene bags.

The new method of freezing and packaging was developed by Ivar Wendt, Seattle seafood distributor selling nationally under the Pacific Pearl brand.

Crabs are caught off the coast of Washington, British Columbia and Alaska. They are carried live in seawater tanks aboard the fishing vessels to shore canneries. There they are cooked and those that range in size from 1¾ lbs. to 2¼ lbs. and are perfect are selected for freezing whole.

Before freezing, the legs are folded under the crab and held in place with a rubber band. The crab is then submerged in brine at zero temperature for 30 minutes. The brine seals the shell and makes it a natural airtight container. This sealing keeps in the juices and natural flavor. The band that held the crab legs in place is then removed, the crab is slipped into an individual polyethylene bag and the bag is heat sealed. Twelve crabs are packed in a carton for shipment to retail outlets.

This method of handling the crab was developed

and tested more than a year ago. Results as to the keeping qualities of the crab and as to the attractiveness of packaging were so satisfactory that this year full-scale production and marketing were undertaken with the start of the current season last December.

Packaging provides one of the key sales points in retail promotion. Large-space newspaper advertising in the Philadelphia market appeared in May pointing out: "They're individually packed in heat-sealed, airtight polyethylene bags that lock in all odor and moisture. They'll keep fresh for months in your home freezer and each bag carries instruction for defrosting and preparing these famous Coast crabs."

The bag is printed in three colors, with prominent attention given to the brand name, Pacific Pearl. The front of the package has a panel on which the retailer may mark weight and price. The back of the package contains direction for defrosting (leave the crab in the bag and defrost at room temperature until the joints move freely) and for preparing.

The freezing in brine that seals the pores of the crab and the packaging in polyethylene combine to give excellent shelf life, Mr. Wendt reports, far superior to anything ever before achieved with frozen whole crab. See-through [Continued on page 165]

Credits: Polyethylene bags by Cello Bag Co., 4550 38 Ave., S.W., Seattle 6. Cartons by Longview Fibre Co., Longview, Wash.



Visibility, unusual in frozen foods, has been important in introducing this Northwestern specialty to Eastern markets. Selected crabs are cooked, frozen in brine bath which seals the shell itself as a protective "package" and then packaged individually in printed polyethylene bags.

Big savings in imprinting labels & packages—



...with Pitney-Bowes Tickometer

Thousands of companies have reduced their inventories of pre-printed labels, cut printing costs, avoided waste—with the Pitney-Bowes Tickometer.

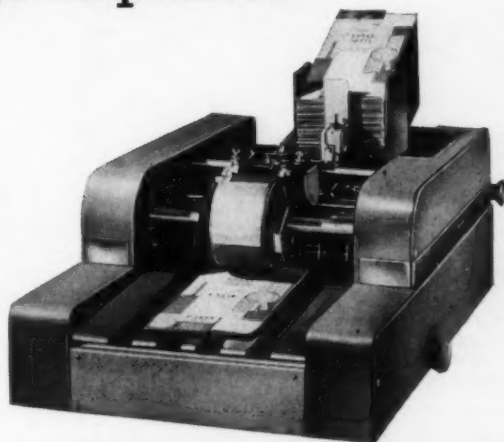
On product labels, the Tickometer can imprint codes, sizes, dates, flavors, weights, specifications, *as needed for current production*. It prints up to 1,000 pieces a minute, feeds and stacks automatically. Its printing area is $2\frac{3}{4}$ " x $\frac{1}{4}$ ". It handles sizes as small as 1" x 2", as large as $8\frac{1}{2}$ " x 5".

The Tickometer offers unlimited applications for marking, coding, cancelling paper forms, tickets, tags, coupons, checks, etc. And it counts so accurately that banks use it to count currency.

...with PB's New Package Imprinter

Now, you can print packages and cartons only *as needed* currently, eliminate costly inventories, and prevent waste of pre-printed material.

This new Package Imprinter offers big savings, increased efficiency in *high quality* imprinting of cartons, bags, envelopes, containers—at speeds up to 7,500 pieces an hour. Will also *imprint dealer advertising literature*. Its printing area is 4" x 18". Uses rubber mats or metal type from 6 pt. up; and it takes sizes from $2\frac{1}{2}$ " x $2\frac{1}{4}$ " up to 18" x 18" and thicknesses from .010" to 3/16". Liquid ink needs no mixing, dries instantly. The register is accurate. Has large capacity, and power stacker. Easily adjustable without tools, and can be operated by anybody. Saves time and money in any packaging operation.



Automatically imprints
at speeds up to 7,500 items an hour.

For a demonstration of either the Tickometer or Package Imprinter, call any Pitney-Bowes office. Or send coupon for free illustrated booklets and helpful case studies.



Pitney-Bowes, Inc.

Made by the originators of the postage meter
... offices in 94 cities in U. S. and Canada



Pitney-Bowes, Inc.
4841 Walnut Street
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- ☐ Send free Tickometer booklet & case studies
☐ Send free Package Imprinter folder & case studies

Name

Address



FASTER BAG FILLING

Bags of VISQUEEN film just naturally fill faster, close easier. Nothing secret about it! Matchless uniformity and superior stiffness and body keep packaging lines operating at higher speeds. Profit-pinching waste is eliminated, too. Alert packagers have the answer to better, more economical packaging . . . VISQUEEN film!

For better packaging, see a converter of VISQUEEN film—today.

VISQUEEN® 'C'

Important! VISQUEEN film is all polyethylene, but not all polyethylene is VISQUEEN. Only VISQUEEN has the benefit of research and resources of The VISKING Corporation.

is the printable film. Unmatched for ink adhesion. Ink stays on—won't come off.

VISQUEEN

film is tougher, has greater tensile strength, better resistance to tear and puncture. VISQUEEN has superior strength—won't split, crack, shatter or run. Cuts down package breakage. VISQUEEN is unaffected by display lights, won't discolor or get brittle—is ageless.



84-2420

THE VISKING CORPORATION

World's largest producers of polyethylene sheeting and tubing
Plastics Division, Terre Haute, Indiana

IN CANADA: VISKING LIMITED, LINDSAY, ONTARIO • IN ENGLAND: BRITISH VISQUEEN LIMITED, STEVENAGE

Shipping electronics

[Continued from page 141]

usable information for consumers.

In addition to the processing aircraft flight-test data, Benson-Lehner machines are now used for plotting brain waves in medical research, for preparing sub-strata maps in geophysical and seismographic research, in guided-missile work and in general research and development in a score of other fields.

Cost of the machines ranges from \$5,000 to \$35,000. Although not as complex as such large-scale computers as the Univac, they do con-



For export shipment, a scrim-laminated moistureproof barrier is wrapped completely around each unit prior to crating, heat sealed and then taped.

tain many delicate printed circuits and fragile components, and require critical adjustments complicating the packaging problem.

Because the equipment is often shipped by air and the company's customers are located on every continent, it is made of light-weight construction incorporating aluminum frames and relatively fragile fine-grain wood or glass fibre cases. Machines are painted a Wedgwood blue for maximum psychological effect on the operator. A few table models are mounted on slender, tapered legs in the modern manner without conventional bracing.

Original packaging operations were performed by plant personnel who lacked experience in this particular field. The company was plagued by packaging accidents, shipping damage claims and the return of equipment for rework. Common types of damage were finish scratches resulting from in-plant movement of equipment to packaging areas, removal of finish by the use of improper cushioning mate-

Bracon

... SQUEEZE-TO-USE PACKAGING



Lovely to look at... *Delightful to squeeze*

... we're referring to the new BRACON bottles for Cuticura Shampoo and Bath Talcum... but we'll admit our young lady is mighty appealing!

Recently, Potter Drug and Chemical Corporation (established 1878) sought to enhance the merchandising appeal of their famous Cuticura products by adding convenience, safety, and eye appeal to the packaging. Their selection? BRACON squeeze-to-use bottles!

New Cuticura containers are made from pliable polyethylene and couldn't be easier to use. A gentle squeeze directs a penetrating stream of shampoo onto the scalp... or dusts just the right amount of powder where it's needed. If sudsy hands slip, there's no danger of breakage... BRACON bottles won't tear, crack or dent.

Delicate printing on the pastel-hued plastic identifies the products—permanently. Moreover, Cuticura's new look was achieved without altering retailing strategy. Economical BRACON squeeze-to-use containers are available in tubes as well as bottles. May we tell you more? Write or phone:



BRADLEY CONTAINER CORPORATION

Maynard, Mass. — New York, Chicago, Los Angeles, Toronto



... and at paper prices!
Naltex plastic containers
pint size—\$29.95 per thousand.
Your label printed on these
reusable containers, continues
to advertise for you.
The colorful tops are made
in red, yellow and blue.



Naltex containers are available
in three sizes—quart, pint +
12 oz.—and they stack together
with economy of space.

FOR SIMPLE, LOW-COST, PROTECTIVE SHIPPING, MAILING, WAREHOUSING



USE JET-PAK CUSHIONED-INSULATED OR VCI-LINED CUSHIONED BAGS

Insert product in bag... fold... tape or staple—that's how easy
it is to use JET-PAK insulated bags.

VCI-LINED CUSHIONED BAGS blanket ferrous metal and aluminum
products with an invisible, dry vapor that provides better pro-
tection than costly, time-consuming greasing... avoids future
degreasing.

CUSHIONED-INSULATED JET-PAKS are ideally suited for economical
shipping and warehousing of most small products, books, etc.
These two new JET-PAK insulated bag lines are moisture-resistant,
lightweight, reusable, durable, economical—they provide products
with positive protection against rough handling and damage.

Available in 12 popular sizes from 5" x 10" to 14¼" x 20".
Write for samples, prices and catalog.

JET-PAK INC. 855 Summer Ave., Newark, N. J.
"A HENRY B. KATZ INDUSTRY"

Can you
answer "Yes"
to all 3?

1. Are you aware of all the ways in which plastics can improve your product?
2. Are you familiar with all the new plastics materials now available?
3. Do you know the properties of these materials and how they can be employed to better your product?

No? Then you may be missing out on many ways in which plastics can profitably be put to use in your business.

Fortunately there is an easy solution: Modern Plastics magazine is the world's most authoritative monthly publication devoted exclusively to the application and use of plastics for all kinds of products. And you can subscribe to it at a cost of only \$6.00 for twelve regular monthly issues and the annual Encyclopedia Issue. Why not send in your order now?

MODERN PLASTICS
A BRESKIN PUBLICATION
575 Madison Avenue • New York 22, N. Y.

rials between cabinets and crating, and cabinets or glass screens crushed or cracked during shipment when bracing was improperly engineered.

Less common, though far more expensive, was damage caused by interior components breaking loose and battering parts inside the machine during shipment. On one occasion a crate was dropped from a fork lift, almost ruining the gear and causing nearly \$1,000 worth of damage.

The solution

Faced with loss of customer good will, Benson-Lehner executives at first were inclined to assign a member of the engineering staff to design proper packages. However, the press of development activities and a large backlog of orders prevented this. Instead, the company employed a contract packaging firm, which assumed the entire packaging operation.

A completely new package was designed, similar to that called for in military specification MIL-P-116B, Method II-A. The larger units, often weighing up to 700 lbs., are bolted to the base of the wooden container, which has been provided with skids. Eight shredded and remolded foam rubber blocks (which cannot mar the finish) are set in place, providing about a 3-in. clearance between the equipment and the container.

A few critical tubes are removed, wrapped in creped cellulose wadding, fastened with gummed tape, placed in 200-lb.-test cartons and either strapped with cotton webbing nailed to the container in voids created by the irregular shape of the machine, or placed in voids within the machine itself and taped to interior framing.

Moveable parts are blocked with cotton webbing and taped. The critical X-Y arms are fastened in a permanent position with break-resistant or pressure-sensitive tape. Two other components sensitive to vibration are packed with cellulose fibre felt. The container itself is constructed of 1-by-2-in. Engleman spruce fastened with No. 8 cement-coated nails, placed over the equipment and affixed to the base.

If the machine is destined for overseas shipment, a sheet of moistureproof and vaporproof scrim-base barrier lamination is placed on the



BEANS

Pop Corn

CANDY

Radishes

NUTS

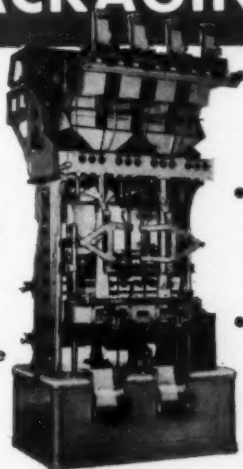
Cake Mix

SNACKS

Soy Sauce

COFFEE

**Whatever your product:
SOLID, LIQUID, POWDER
or SEMI-LIQUID . . . you need
the all new completely automatic**



- Forms the Package from Roll Stock
- Fills the Package to Exact Measure

- Hermetically Seals with Straight Cutoff
- Perfect Register of Printed Design

for High Speed, Buy Appealing, Economical Pillow Packaging

Let us help you with your packaging problem—WRITE US TODAY!

HAYSSEN

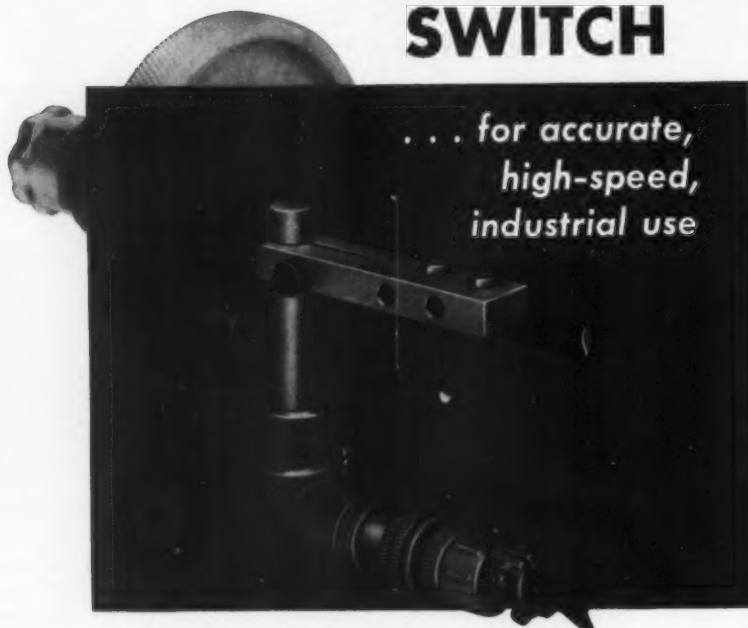
MANUFACTURING COMPANY • Dept. MP-6 • SHEBOYGAN, WIS.
first in Automatic Packaging Since 1910

Albany • Atlanta • Boston • Chicago • Dallas • Denver • Detroit • Los Angeles • Minneapolis
New York • Philadelphia • St. Louis • San Francisco • Seattle • Montreal • Toronto

POST

Decitron

MAGNETIC SWITCH



... for accurate,
high-speed,
industrial use

Positive 'sensing' from zero to 100 cycles per second

The Post model MH-2 is a magnetically operated high-speed switch which is controlled by the proximity of a magnetic field. When the magnet reaches the face of the sealed switch, there is a clean 'make', or contact, and as the magnet moves away, a positive 'break' occurs. No lag . . . no jumping.

Unique in operation, the MH-2 works fully as well at low speeds. For example, a clearly defined 'make' and 'break' is possible at any speed range from zero up to 100 cycles per second. The MH-2 has a 'life' of over 30 billion cycles.

Post's MH-2 is an ideal sensing device for actuating electronic and mechanical counters, controls, solenoids, relays, and other electrical and electronic circuits. Write Post for descriptive literature "M" today.



Electronic Products Division
POST MACHINERY CO.

Elliott Street—Dept. M Beverly, Massachusetts

base, the equipment packed with silica gel desiccant and installed, wrapped with the barrier canopy, heat sealed and strapped.

So effective is the package that a second accident in which it was dropped from a fork lift under the same conditions created only \$40 worth of damage.

Benson-Lehner technicians are able to unpack and install the equipment and have it working according to factory specifications in less than one hour.

Mirror lipstick unit

Max Factor of Hollywood, Calif., introduces new Hi-Fi lipsticks with a permanent mirror merchandising unit that's easy to service, easy to sell from and a natural attention getter.

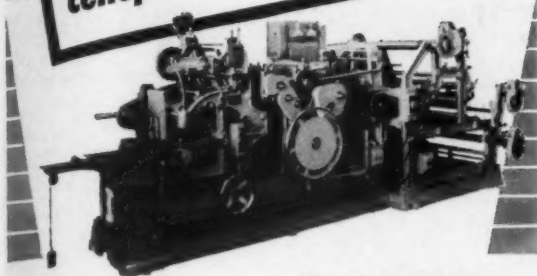
Attracted by the mirror, the customer faces the complete color chart of Hi-Fi shades. The front features



a reproduction of the individual lipstick tube, the strong four-point selling story and the price. The complete unit is only 12 in. wide, 10½ in. deep and 12 in. high.

Stock is stored in back, in pigeonholes within the triangular construction. The back is closed by sliding doors. Each lipstick is placed top into the pigeonhole, thus showing the clerk the shade name on the bottom label. At the base of each row of lipsticks is the shade name. The pigeonholes are 12 high, thus giving each dealer storage space for a dozen of each of the nine shades. At the right is one row of pigeon holes marked "reserve stock." Also on the back is a color chart and descriptive phrases for each shade as a clerk aid in selling. This merchandising unit is shipped free with 6 doz. assorted shades.

**most versatile
cellophane bag machine!**



POTDEVIN '111' HIGH SPEED CELLOPHANE BAG MACHINE

The "111" makes:

- Full lip pasted bags.
- Pasted flush-cut bags with thumb cut.
- Combination shirt bags with thumb cut.
- Heat seal and pasted bottom with shallow lip.
- Heat seal and pasted bottom with flush-cut (with thumb cut).

Range: 2" x 6½" up to 10½ x 16¼"

Write for further details

POTDEVIN MACHINE CO.

244 North Street

Teterboro, New Jersey



Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling

IN ONE OPERATION...

You can get
FLEXIBLE PACKAGES

made
filled
sealed
printed
counted

WITH THE

PAK-RAPID

This versatile, easy-to-operate machine does five jobs in one operation. It packages one or more items—whether fragile or durable, even or odd-shaped, oily or dry, up to 1¼" thick . . . in transparent films, barrier papers or foil laminations.

The Pak-Rapid will meet your packaging requirements, military packaging specifications, and will lower your costs. "See Us At Booth 333"

Find out all
about it.
Write to:

PAK-RAPID INC.

Incorporated 1945

Builders of fine packaging machines
ELIZABETH 56. W. CONSHOCKEN, PA.

Quick Quiz

FOR PACKAGING SUPPLIERS

Q. Which packaging magazine provides the greatest amount of helpful editorial material and how-to-do-it information for its subscribers?

A. An actual page-by-page count reveals that MODERN PACKAGING routinely carries more than twice as many pages of editorial matter as any of the other publications in the packaging field.

Q. Which magazine is the first choice of packaging advertisers?

A. Judged by the votes of the men who should know best—the companies and advertising agencies who back their opinions with advertising appropriations—MODERN PACKAGING is far and away the field's most powerful and influential medium. In 1955, MODERN PACKAGING carried the advertising of 60% more packaging suppliers than the second-place publication!

Q. Which packaging magazine presents the greatest volume of advertising?

A. Again the answer is MODERN PACKAGING! The record shows that in 1955 MODERN PACKAGING carried 2,309 pages of advertising as against 1,125 for the second publication. That's a 2-to-1 lead!

Q. Which of the magazines is the oldest and most influential in the field?

A. The records show that before the first issue of MODERN PACKAGING, back in 1927, packaging was not clearly recognized as one of the greatest single factors in modern merchandising and distribution. MODERN PACKAGING pioneered that idea and has been largely responsible for establishing packaging operations on a sound and scientific basis.

If you make anything that packagers buy, you'll want to know more about MODERN PACKAGING as an advertising medium: who it reaches, how it stimulates buying action, how much it costs to deliver your sales messages in it. Just write to Advertising Department, MODERN PACKAGING magazine, 575 Madison Avenue, New York 22, N. Y.

SHOPPERS WANT TO SEE
WHAT THEY BUY...







Cellophane helps set year-round records for paper-plate sales

"We wanted a greater year-round market for our paper-plate line," reports the Fonda Container Company, Inc., St. Albans, Vermont. "Our answer was a new group of trays which could be used for 'at-home' entertaining. Du Pont cellophane shows the colorful designs clearly and gives this new line the sparkle and appeal to sell itself."

Manufacturers in the paper-goods industry—like those in many other fields—know that transparent packaging with cellophane moves goods faster. Only with cellophane do you get maximum visibility combined with proper protection, ease of machine operation and low cost.

E. I. du Pont de Nemours & Co. (Inc.), Film Department, Wilmington 98, Delaware.

ONLY DU PONT OFFERS YOU ALL THESE PACKAGING ADVANTAGES: Over 100 varieties of

film  technical experts to advise you  consumer buying studies to guide you  powerful national advertising  to back you.



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

DU PONT PACKAGING FILMS

CELLOPHANE

"MYLAR" POLYESTER FILM
ACETATE FILM

**NOW - At Last
THE KEY TO
PROFITABLE
SMALL RUN
POLYETHYLENE
ORDERS!**



Poly-ette

THE
JUNIOR SIZE, PRECISION
POLYETHYLENE BAG MACHINE
**THAT MINIMIZES
DISRUPTION OF
LARGE, CAPITAL
EQUIPMENT!**

- ✦ **UTTERLY SIMPLE TO OPERATE**
- ✦ **HANDLES PLAIN OR PRINTED, FLAT OR GUSSETED TUBING**
- ✦ **SETS UP IN A JIFFY**
- ✦ **SMOOTH UNIFORM SEALS**
- ✦ **VERY LOW COST**
- ✦ **BUILT TO PRECISION STANDARDS**
- ✦ **HANDLES ALL GRADES OF FILM**

SIZE RANGE: Handles bags from 0" to 14" in width and to 27" in length.

SPEEDS: Approximately 60 per minute on average size bags. Rates on gusseted bags run slightly lower.

Close up the profit leaks in your polyethylene operation. Let portable, durable Poly-ette plug the gap. Its ease of operation, simple changeover and ability to handle all grades of film make for quick deliveries, happy customers. It's an essential adjunct to any converting operation that will earn its keep quickly.

Ask for a demonstration
at our N. Y. offices.



Booster for take-homes

New four-color cartons that feature a circus motif with "Scoopy, the Safe-T Cone Clown," are helping the Safe-T Pacific Baking Co. to boost



its distribution of ice-cream cones throughout the Western states "by a substantial percentage," according to Arthur Graham, president and general manager of the firm.

The new carton represents the first major change in the packaging of Safe-T cones since their introduction prior to World War II. The new design has also been applied to the company's Safe-T Cups package to provide a family resemblance in the line. Both packages are 24-count, giant economy size, which, according to Lorne R. Stanley, sales manager of the company's Take-Home Pak Division, are rapidly taking the lead over the 12-count units.

Eye appeal in the package is enhanced with bright colors of red, yellow and blue, plus vivid reproduction of the cone and ice cream combined with the gay treatment of "Scoopy" the clown.

Safe-T Pacific Baking Co. also uses the new packages to promote its premiums, including salt and pepper shakers made in the form of cones and ice-cream dippers. In addition, the face of the carton is reproduced on the side panels and labeled "trading cards" to appeal to the kids.

The new package was designed so that the front panel may be displayed horizontally and the back vertically, thereby insuring maximum impact at point of sale.

Credit: Cartons designed and produced by H. S. Crocker Co., Inc., 1000 San Mateo Ave., San Bruno, Calif.

Dolls and fashions

Continued emphasis on better toy packaging is indicated by the complete line of dolls and dolls' clothing which are being packaged by



Terri Lee Sales Corp., Apple Valley, Calif., in a family of cartons. Dolls are put in two-piece cartons with die-cut inserts to hold them in place at its head and feet. The clothes cartons are in two styles, both with acetate windows: a two-piece box and a folder which can be easily opened and re-closed by a die-cut lock in its rear panel. All cartons are made of white-patent-coated board, colorfully printed in appealing designs.

Credit: Cartons by Los Angeles Div., Robert Gair Co., Inc., 155 E. 44 St., New York 17.

Northwest sea treat

[Continued from page 154]

package, coupled with full directions for preparation, encourages impulse buying, particularly for those looking for a new treat in sea food.

Frozen whole crab has an especial competitive advantage. For some time imports of canned crab from Japan have given canned crab from our North Pacific Coast stiff price competition. But the shift to a frozen crab puts this article in a class by itself.

Supplementing sale of frozen whole crab is another new item—Pacific Pearl brand frozen crab meat, loose packed in a No. 2 can. Frozen crab meat in cans provides a market for sizes that do not fit into the 2-lb. range of frozen whole crab and for those that may be caught—as frequently does happen—with a leg missing.

Credits: Polyethylene bags by Cello Bag Co., 4550 38 Ave., S.W., Seattle 6. Cartons by Longview Fibre Co., Longview, Wash.

For sales promotion, advertising and informative labeling use Avery pressure-sensitive labels



NEW!

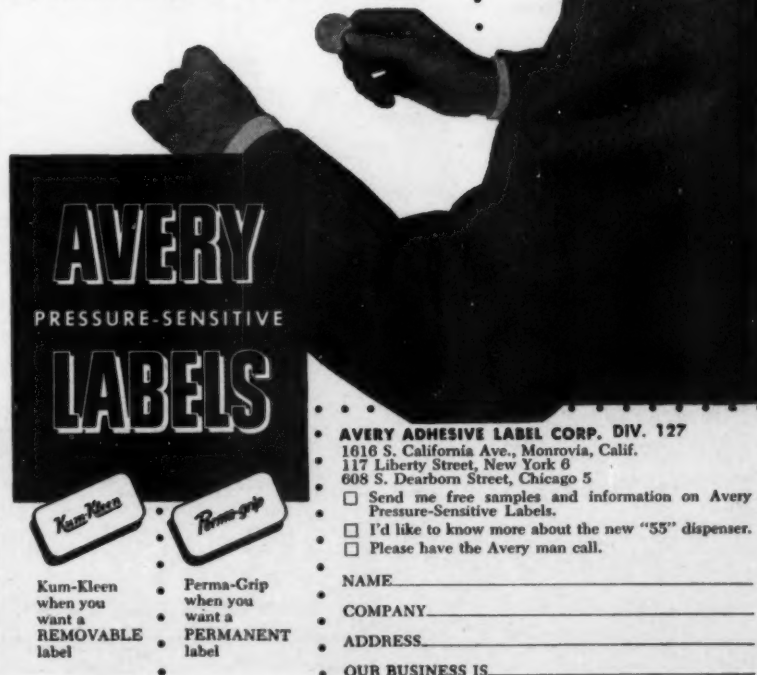
LABELING IS FAST AND EASY WITH AVERY'S NEW "55" ELECTRIC DISPENSER

It's completely automatic—ask for a demonstration!

Avery pressure-sensitive labels can save you time, labor and money—they adhere firmly to all hard-to-label surfaces without moistening—surfaces such as cellophane, metallic paper, pliofilm, polyethylene, glass, metal, plastic, ceramics, varnished cardboard or wood. They're practical and economical—and as packaging labels—can be applied four times as fast as water moistened labels. There's no waste motion in handling or sorting loose labels—no sticky fingers, messy labels, or spoiled packages.

They can be produced to your exact size, shape or color and individually die-cut on sheets or in rolls for manual or automatic labeling—and you can depend upon Avery's fast delivery promises!

Dramatize your package the easy way—cut labeling costs—*build sales* with AVERY pressure-sensitive labels! Ask for samples and further information. DO IT NOW!



• AVERY ADHESIVE LABEL CORP. DIV. 127
 1616 S. California Ave., Monrovia, Calif.
 117 Liberty Street, New York 6
 608 S. Dearborn Street, Chicago 5

☐ Send me free samples and information on Avery Pressure-Sensitive Labels.
☐ I'd like to know more about the new "55" dispenser.
☐ Please have the Avery man call.

NAME _____
 COMPANY _____
 ADDRESS _____
 OUR BUSINESS IS _____

Kum-Kleen
when you want a REMOVABLE label

Perma-Grip
when you want a PERMANENT label

IT'S NEW!



Pat. Pending

MODEL S-2
AUTOMATIC
FULLY ADJUSTABLE

**THE
MACHINE
OF TOMORROW
FOR THE
PACKAGE
OF TOMORROW**



Here it is—for the first time—a wrapping machine that will meet your most exacting requirements. The Schooler "Wrap-master"—automatic and fully adjustable, within one minute, to your package size—without tools or change parts. For plain or printed cellophane, waxed, or foil—with or without electric eye.

Will be demonstrated at the WESTERN PACKAGING EXPOSITION, Booth 229, July 10-12, Los Angeles, and the P.M.M.I. EXPOSITION, Booth 222, September 11-14, Cleveland.

If you can't visit either of these shows, write or wire us.

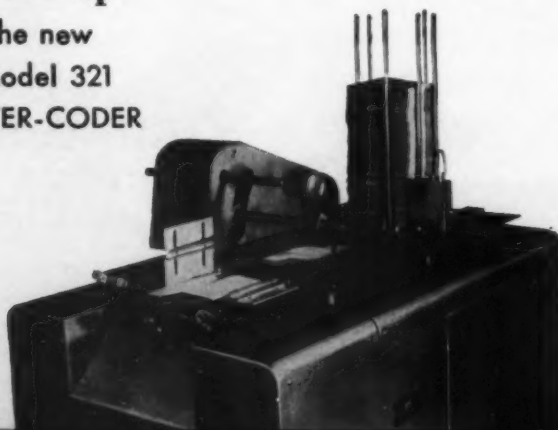
Telephone Victoria 9-2816

SCHOOLER MANUFACTURING COMPANY
101 WEST MAGNOLIA BOULEVARD BURBANK, CALIFORNIA

Print Cartons At Set-up

with the new
**Bivans Model 321
PRINTER-CODER**

Printer-Coder
Installed on
TUCK-O-MAT



- tuck-o-mat
- convey-o-mat
- printer-coder
- carton closer



Write for our new brochure

EL BIVANS, Inc.

2431 Dallas Street
Los Angeles 31, California

NEW JERSEY MACHINE CORP. HOBOKEN • CINCINNATI • CHICAGO • LOS ANGELES

Handy for vinegar

Bottles with blown swirls, top and bottom, providing a handy grip, have been selected to package two types of wine vinegars, red and white, and four flavors, tarragon, dill, onion and garlic, marketed by Muscat



Cooperative Growers, Kingsburg, Calif., under the brand name of Ramona Wine Vinegar. Bottle capacities are 1 pt. and 10 oz.

Credits: Bottles by Owens-Illinois Glass Co., Toledo, Ohio. Closures by Latchford-Marble Glass Co., Box 4707 Florence Branch, Los Angeles 1. Labels by Western Lithograph Co., 600 E. Second St., Los Angeles 54. Cellulose bands by The Celon Co., 2030 Pennsylvania Ave., Madison 4, Wis.

The West gets bigger

[Continued from page 136]

oil and paint. Can output for the first nine months of 1955, the latest period for which figures are available, ran from 5 to 11% ahead of that for 1954.

During the same period, glass container operations ran almost the same degree over 1954. Corrugated shipping containers did even better, running 15 to 20% above the previous nine months.

Both folding and set-up paper box production in the West is topping previous records, while aluminum foil usage has increased 25% despite higher prices from converters.

The outlook for packaging machinery in the West appears just as good. Recent months have seen the development and rapid widespread adoption of the first successful auto-



Celanese

POLYETHYLENE *moves merchandise!*

Soft goods demand the supple packaging of Celanese Polyethylene. This tough, flexible film combines attention-getting beauty and exceptional clarity with a lasting sales package. It won't deteriorate, get brittle or wrinkle . . . retains its beauty and strength throughout its life on the shelf. Its even gauge makes a uniformly perfect surface for sharp, long-wearing printed messages. Specify Celanese Polyethylene for wraps, bags and envelopes. Celanese Corporation of America, Plastics Division, Dept. 208-F, 290 Ferry Street, Newark 5, N. J. Canadian Affiliate, Canadian Chemical Company, Limited, Montreal, Toronto, Vancouver.

Celanese®

Celanese

Packaging Films



BRISTOL-MYERS CHOOSES DRY-LABELING

"Our three Bufferin assembly lines are equipped with New Jersey Label-Dri Labelers. We get fast, trouble-free automatic operation and the best-looking labeling in our experience."

Leslie W. Smith, Head of Finishing Department, Bristol-Myers Co., Hillside, N. J.

DRY-LABELING IMPROVES PACKAGE APPEARANCE

Automatic production increases output as much as 12,000 units per day, per machine.

New Label-Dri thermoplastic labeling machines, introduced by long-established New Jersey Machine Corporation, eliminate glue from your labeling operation. They add valuable productive hours, deliver an improved package. Dry labeling ends appearance-marring label smears and unproductive "downtime" of glue equipment. Does away with time-consuming glue preparation and clean-up. Labels are backed with

plastic adhesive, heat-bonded to your package. Inexpensive, fast... up to 300 per minute, in perfect register and absolutely smooth.

Label-Dri models for many needs.

Write for comparative production data, applications in your industry.



The Label-DRI CHAMPION. Speed: 300/minute and more

NEW JERSEY MACHINE CORPORATION

AUTOMATIC LABELING



PACKAGING • PAPER BOX MACHINERY • MAKERS OF THE PONY LABELRITE

MAIN OFFICE AND FACTORY:
1500 WILLOW AVENUE, HOBOKEN, N. J.

FACTORY SALES AND SERVICE BRANCHES:
CHICAGO, CINCINNATI, LOS ANGELES

Do you have a

"Packaging Orphan"?

IN YOUR COMPANY he may be called the Sales Manager... or the Advertising Manager... or the Director of Purchases; the title isn't important. The man we're talking about is the one whose interest in the packaging function sometimes may be considered secondary, while the successful completion of his duties depends in a significant measure on the appearance of your company's packages and the protection they give to your products.

If this man, whatever his title may be, doesn't get his own personal copy of *Modern Packaging* magazine every month to keep him up-to-date, you've a

"packaging orphan" on your hands. While he should be, he probably isn't up on all the latest trends in package design and production, on how to package to build more sales, on what's "hot" in protective and decorative packaging.

Modern Packaging isn't a cure-all for this man, but it will keep him posted on the important packaging developments he ought to know about. A twelve-month subscription for him costs only \$6.00 in the United States and Canada, \$10.00 in Pan America, \$20.00 elsewhere. Write today; we'll enter his subscription immediately and bill your company later.

Subscription Department

MODERN PACKAGING

575 Madison Avenue, New York 22, New York

matic casing machine for frozen foods* and such units as a carton weigher and filler for dried prunes and apricots which is claimed to save \$127 every 8 hrs. by eliminating former hand-filling and check-weighing operations.

Developments move fast in the West. Teamwork between brewery, package and machinery suppliers has enabled Burgermeister beer of San Francisco to come out with a twin-pack carrier for quart cans of beer within a period of only six weeks after this new style of package became available.

These and many more developments give credence to the optimism with which Western packaging views the future. Evidence of these gains will be amply displayed to registrants at next month's Western Packaging Show.

*See "A Casing Problem Solved," *Modern Packaging*, Oct., 1955, p. 120.

Piggy-back on window

[Continued from page 137]

Although there is no price concession—the price of the combined deal being the same as the total price of the two packages bought separately—the Piggy-Pak is reported to have increased substantially the sales of both items.

The window-flap construction has two merchandising and protective advantages. It provides the product visibility which consumers demand for these meat items, yet when the flap is down the meat is protected from damaging light rays. At the same time, the flap area is available for important brand-name display. A double-lock closure on the back of each package permits easy opening and secure reclosure.

With the combination package, both sausage and bacon packages are filled and closed in the normal manner before the two units are joined together. Although the glue spots are sufficient to hold the combined package together during any normal handling, the top package can easily be pulled away from the bottom flap for opening.

The only special labeling of the combination package is a red-and-white pressure-sensitive strip label along one end panel of the bacon package, which carries the legend, "Anniversary Special."

ONLY:

OXY-DRY

PRECISION ENGINEERING

GIVES YOU ALL THESE COMPETITIVE ADVANTAGES

GREATER PRESS SPEEDS
more impressions per hour

REDUCES REJECT SHEET WASTE
more deliverable sheets

PERMITS FULL PRESS LOADS
faster job handling time

USES LESS OFFSET POWDER
costs less to operate

FASTER SETTING & DRYING OF INK
less waiting time for next operation

ELIMINATES STATIC ELECTRICITY
"plumb-bob" jogging on press delivery

MUCH LESS SERVICE & MAINTENANCE
ON it...set it...forget it operation

ANY one of the above advantages would make OXY-DRY superior to any and all other offset prevention methods. Combined, they give the printing plant that has OXY-DRY equipment a tremendous competitive advantage that simply means more business, more profits and more satisfied customers.

If you want to increase the number of impressions per hour for every press in your plant, then you need OXY-DRY sprayers... write, wire or phone us today for more details.

OXY-DRY

**THE ONLY RIGHT INK
OFFSET PREVENTION PROCESS**

**OXY-DRY SPRAYER
CORPORATION**

NEW YORK CHICAGO SAN FRANCISCO

330 South Marshfield Avenue, Dept. MP,

**GET
IT..**

OXY-DRY SPRAYER CORPORATION
330 S. Marshfield Ave.
Chicago 12, Illinois

We are interested in OXY-DRY Sprayers;

send more information ☐
or your representative. ☐

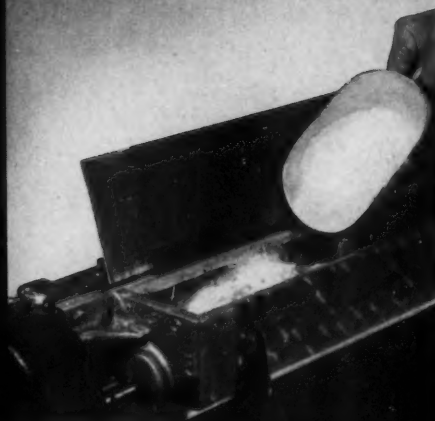
Firm Name _____

Address _____

City _____ Zone _____ State _____

Individual _____

**FILL
IT..**



**SET
IT..**



**FORGET
IT!**

if it's worth a wrap



...wrap it right in REVEREFO

Have you talked to Revere about foil? Found out how our Research and Development Laboratories can help with your problems? Talked to our Technical Advisors? See our brand-new 16 mm movie about foil? (It runs 13 minutes, is in sound and color and is available, free, to any group showing any time you say.) Those who've seen it tell us it's one of the best.

To get a quick idea of what Revere has to offer in foil, send for our new Embossed and Colored Metal Paper

Booklet:
Advisor:
Executive:
33 Prin:
Manufac:
heat seal:
foil lami:
other bag:



REFOIL

Booklet, Better yet, ask to have one of our Technical
Advisors call. Revere Copper and Brass Incorporated,
Executive Offices, 230 Park Ave., N. Y. C., Sales Offices in
33 Principal Cities.

Manufacturers of aluminum foil, plain, colored, embossed,
heat seal and other types of specified coatings. Also aluminum
foil laminated to tissue, paper, board, film, and a variety of
other backing materials.





controlled packaging*

***"CONTROLLED PACKAGING"** by
FLUID CHEMICAL COMPANY is accomplished
 through modern machinery, technical
 know how, and years of experience.



You will recognize, from this partial list, some of the present users of FLUID'S extensive facilities:

CARTER PRODUCTS — HOUBIGANT, INC — JOHNSON & JOHNSON
 LEHN & FINK PRODUCTS CORP. — LENTHERIC, INC. — LEVER BROTHERS
 NORWICH PHARMACAL CO. — PRINCE MATCHABELLI, INC. — REVLON, INC.
 ROUSSEL CORPORATION — WARNER-LAMBERT PHARMACEUTICAL — J. B. WILLIAMS

For a safer and more reliable contract filling service on your products, you can depend on FLUID'S new "CONTROLLED PACKAGING." This unique economical service is available on individual products or for your complete requirements. As we manufacture no products of our own, you are always assured the personal attention and service your brands deserve. For your contract packaging needs, write or phone FLUID today.

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 CHEMICAL COMPANY INC.

883 MT. PROSPECT AVE., NEWARK, N. J.

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PRODUCTS: AEROSOLS—GLASS AND METAL
 LIQUID—TUBE—JAR—DRY PACK FILLING
 RESEARCH * DEVELOPMENT
 FOUNDED 1921

Heat-processible food films

*An investigation of the performance of food-filled bags
at cooking temperatures, with the use
of a unique water and air superimposing retort*

*By Alvin I. Nelson,
Kwoh H. Hu
and Marvin P. Steinberg**

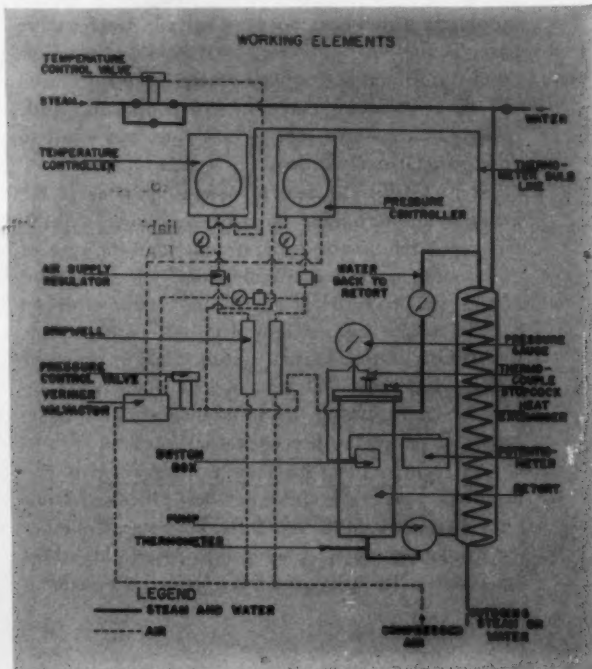
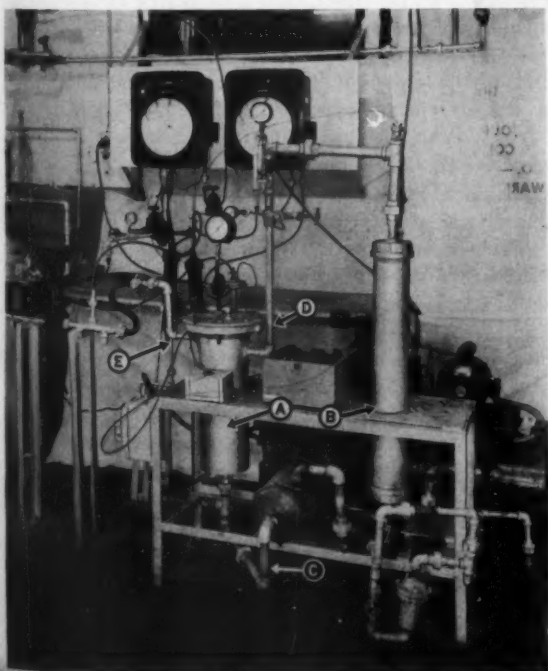
During the past 20 years, there has been a considerable increase and expansion in the use of plastic films for packaging fresh, dried and frozen food products. Most of the films used for packaging these products have low heat resistance and their uses

*This work was performed by the authors at the Dept. of Food Technology, University of Illinois, Urbana, Ill.

are limited to room or cold-storage temperatures.

Recently, due to the advancement of chemical technology and other allied fields, there have been some plastic films developed that are reported to be resistant to temperature above 250 deg. F. These films are heat sealable, flexible and transparent or translucent. The use of plastic films for heat-

Figs. 1 and 2. Special water-and-air retort used in experiments is shown photographically and schematically. In photograph, water is pumped from retort (A) through (C) to heat exchanger (B), where it is heated by high-pressure steam. Hot water enters retort top at (D). Compressed air is superimposed above water level at (E) and exerts pressure of 30-32 p.s.i.g. Proportional controllers regulate temperature and pressure.



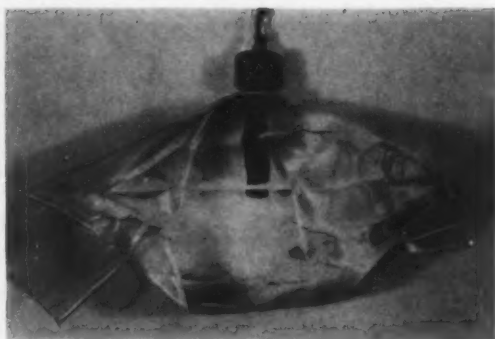


Fig. 3. Fitting of thermocouple in plastic bag for heat-penetration measurements.

processed foods could offer the following distinct advantages over the rigid container:

1. The empty film containers could be delivered as continuous rolls of pouches or tubes with their sides pressed to each other. In this compact form, much shipping and storing space for empty containers would be saved.

2. Transparent or translucent film containers would contribute eye appeal to many bright-colored food products which are not light sensitive.

3. The plastic film could be shaped into irregular forms for special containers. It is particularly suitable for packaging flat food products, such as steaks, chops and fillets.

4. The plastic container is squeezable, which characteristic would aid in removing some viscous food products.

5. The plastic film is readily adaptable to radiation or so-called "cold sterilization."

It also appears that the commercial use of plastic films for heat-processed foods poses some special problems which have not been solved. Among these are factors of economy, permeability, possible toxicity, filling, sealing and storage stability. Some of these problems may not prove difficult, while others may require considerable time and effort to find satisfactory solutions.

It is possible to heat process acid foods at the temperature of boiling water or even lower, depending upon the nature of the product and the type of processing operation. Commercially, the non-acid foods are processed in a pressure cooker or retort at about 250 deg. F. for a definite length of time. Therefore, it appears that testing films to show the effect of treatment at 250 deg. F. would yield information regarding the suitability of these materials for packaging heat-processed foods.

No report of experimental work devoted to the study of plastic containers for heat-processed foods has been found in the literature. However, a number of available films were claimed to possess high heat resistance. Based on this information, it is evident

that any study devoted to the use of plastic containers for heat-processed foods should begin with some simple screening tests. Those films whose appearance is greatly impaired by exposure to high temperatures or which exhibit unacceptable tastes or odors may be eliminated from further testing. The films which pass these preliminary screening tests may be evaluated with regard to the effect of heat on those physical properties considered important for food packages. Of course, the final step should be the study of actual performance of films used for packaging heat-processed foods.

Materials and methods

A. Screening tests. The literature review on plastic films of high heat resistance revealed that seven films were available which would withstand temperatures of 250 deg. F. or above. Two films of low heat resistance—namely, Pliofilm and polyethylene—were included with the seven films of high heat resistance in the initial heat-resistance test. Pliofilm and polyethylene were used so observations of the changes exhibited by films of various heat resistance could be more readily compared.

The first screening study was carried out to evaluate the general heat-resistant properties of the films. In this test, one set of film samples was subjected to 30-min. treatment in boiling water, while the other set of film samples was subjected to 30-min. treatment in 250 deg. F. steam at 15 lbs. pressure. The films which appeared to withstand these two temperatures were subjected to the second screening test. The second screening test was of an

Table 1: Test for smell, taste and degree of turbidity of water in which films were boiled

Samples	Boiled water decanted from films, cooled to room temperature				
	Smell ¹	Chewing ²	Taste ¹	Relative transparency ²	Degree of turbidity ¹
	min. ³	%		%*	
1. Tygon S22-2	3	5	2	89	Very cloudy
2. Vinyl blood pack	3	8	1	93	Moderately cloudy
3. Saran A517, 200	8	9	1	86	Very cloudy
4. Mylar polyester A, 200	9	9	8	99	Clear
5. Trithene A, 200	9	9	8	100	Clear
6. Teflon, 500	9	9	7	99	Clear
7. Distilled water			8	100	Clear

*Measured by Lumetron photoelectric colorimeter.

¹Judged by naked eye.

³Organoleptic score.

Table II: Determination of water-vapor permeability

(At 100 deg. F., 1.341 in. Hg. vapor-pressure difference)

Film samples	Exposed to heat	Water-vapor transmission gm./100 sq. in./24 hrs.
Pliofilm N 1 140*	None	5.2×10^{-1} to 6.1×10^{-1}
Mylar polyester A, 200	None	6.38×10^{-1}
" " " "	212° F., 30 min.	6.54×10^{-1}
" " " "	230° F., 30 min.	6.63×10^{-1}
" " " "	250° F., 30 min.	7.27×10^{-1}
Mylar polyester A, 300	None	4.72×10^{-1}
" " " "	212° F., 30 min.	5.51×10^{-1}
" " " "	230° F., 30 min.	5.74×10^{-1}
" " " "	250° F., 30 min.	5.38×10^{-1}
Trithene A, 200	None	1.78×10^{-2}
" " " "	212° F., 30 min.	1.99×10^{-2}
" " " "	230° F., 30 min.	1.73×10^{-2}
" " " "	250° F., 30 min.	1.89×10^{-2}
Saran A517, 200	None	8.0×10^{-2}

*The sample was kindly given by P. K. Wolper of Riegel Paper Corp., Milford, N. J. The WVTR determined by him was 6.0×10^{-1} to 6.7×10^{-1} gm./100 sq. in./24 hrs. at 100° F. and 92% R. H.

organoleptic nature which included the actual smelling and tasting of the films. In the second screening test, the films were also immersed in boiling water for 30 min. and the boiled solution was tasted and its turbidity measured with the Lumetron photoelectric colorimeter.

B. Determination of film permeability. The films which passed the two screening tests were evaluated for permeability. Various permeability measurements were made on the films both before and after heat treatment. Data on heat exposure of the films as related to the film's mechanical properties were, in some cases, provided by the manufacturer. However, data on the heat exposure as related to the film's permeability were always lacking.

The water-vapor permeability was determined by the dish method (3).¹ Distilled water at 115 deg. F. was added to the test dish. The film was mounted and sealed to the dish (20.6 sq. in.) as described in the GFWVT method (10). The dish was placed in the constant-humidity cabinet maintained at 100 deg. F. and about 30% R.H. for 6 hrs. to condition the sample. It was then weighed, replaced in the cabinet for 72 hrs. and reweighed. The weight loss was used in the permeability calculations. Determinations were made in triplicate.

Gas permeability was determined by Landrock and Proctor's method (7) and organic vapor permeability by the method of Muldoon, Couch and Barnes (9).

¹Numbers in parentheses identify References appended.

C. Packaging of acid and non-acid foods. For the actual food packaging tests, applesauce and tomato juice were used as representative of the acid foods and potato-meat stew as representative of the non-acid foods. These products were selected on the basis of their availability and the ease of detection, when present, of off-color and off-flavor characteristics.

A thermal impulse heat sealer was used throughout the experiment for the sealing of Mylar polyester and Trithene films.² The film sheet was folded and sealed at two sides to form a bag. After the bag had been filled with the food product, the open end was sealed immediately.

D. Use of water and air superimposing retort. The water and air superimposing retort (Figs. 1 and 2) used in this study was unique in design and different from the conventional water and air superimposing retort used for processing foods in glass containers. The main difference is that in the conventional retort for glass containers the steam is injected directly into the water in the retort, whereas in this retort the steam heated the water indirectly.

In the laboratory model, the pressure inside the retort increased to 30 to 32 p.s.i.g. when the water temperature was raised to 250 deg. F. without the introduction of compressed air. This pressure was obtained by the expansion of air and water vapor inside the closed system and was sufficient to counteract the internal pressure developed in the

²"Trithene" is the Visking brand of trifluorochloroethylene.

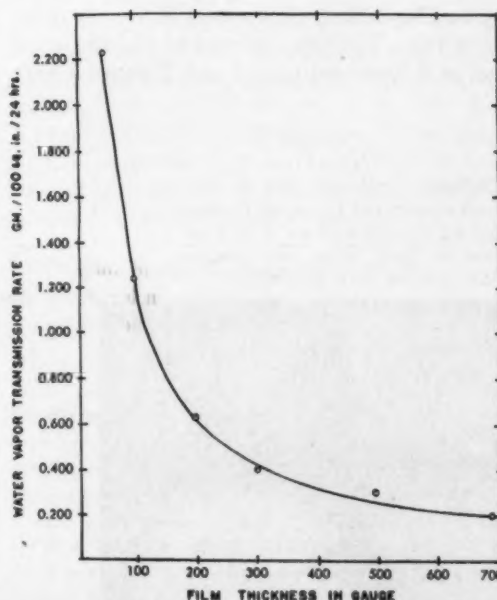


FIG. 4 WATER VAPOR TRANSMISSION RATE VS. FILM THICKNESS OF MYLAR POLYESTER A

film container during processing (8, 12). The compressed air, injected into the retort just before cooling, prevented the package from bursting during the cooling period.

E. *Measurement of heat penetration in the plastic container.* The temperature at the center of the plastic container was measured with the conventional thermocouple (Fig. 3) generally used for measuring the center temperature of food processed in a tin can. During heat-penetration tests the plastics bag was supported by a wire screen cylinder in an effort to maintain a cylindrical shape in the film container.

Results and discussion

A. *Screening tests.* Pliofilm, polyethylene and cellophane were either broken apart or the surface peeled off in layers when subjected to 250 deg. F. for 30 minutes. Therefore, these films were eliminated from further study.

Six films remained for further testing. A panel of four members was used for all organoleptic tests. This testing throughout the entire study was based on a scoring system which ranged from 1 to 9. The figure "1" represented the least acceptable and "9" was the best. Scores under 5 were definitely unacceptable, while scores above were increasingly more desirable as the value approached 9. The average scores of the organoleptic results representing the second screening test are listed in Table I.

The films which passed the two screening tests were Mylar polyester A, Trithene A and Teflon (2, 5, 11). No satisfactory way had been devised for heat sealing Teflon, which was available only in the sheet form. Therefore, Teflon was also eliminated and only Mylar polyester A and Trithene A were

Table III: Weight loss of packaged applesauce compared to the dish method in a 10-week storage period

Film sample	gm./100 sq. in./24 hrs.	
	Wt. loss of packaged applesauce	Wt. loss in dish method
Mylar Polyester A, 200	6.74×10^{-1}	5.88×10^{-1}
Mylar Polyester A, 300	4.85×10^{-1}	4.51×10^{-1}
Trithene A, 200	13.1×10^{-2}	8.26×10^{-2}
Trithene A, 400	25.2×10^{-2}	9.03×10^{-2}

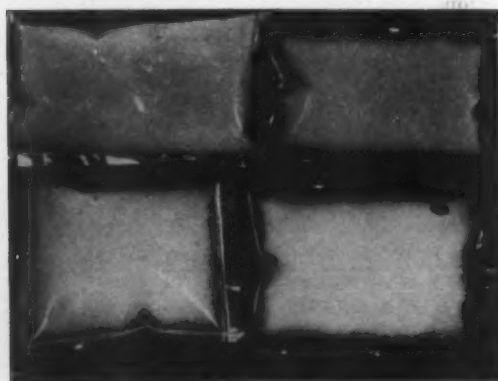
carried on for further detailed study in the tests.

B. *Determination of water-vapor permeability as related to heat stability.* Six different thicknesses of Mylar polyester A film were investigated for their water-vapor permeability. The results have been presented in Fig. 4. They show a hyperbolic relationship, $xy = k$, between the film thickness and its permeability. In other words, the water-vapor-transmission rate of Mylar polyester A film is inversely proportional to the film thickness. This is in accordance with the theory for water-vapor permeability of hydrophobic polymers as stated by other investigators (1, 4).

To study the effect of heat exposure on the water-vapor-transmission rate of the film, samples of Mylar polyester A and Trithene A were exposed to steam at 212 deg. F., 230 deg. F. and 250 deg. F. for 30-min. intervals each. The results, given in Table II, show that Mylar polyester A film has a relatively moderate water-vapor-transmission rate, which has a tendency to increase after the film is exposed to a higher temperature. Trithene A film has a very low water-vapor-transmission rate which is about 3% that of Mylar polyester A and about 22% that of Saran A517. Trithene A also has a tendency to show a slight increase in water-vapor-transmission rate after exposures to the maximum temperature.

Water-vapor-transmission rates shown by the dish method were compared to weight loss of foods packaged in the same film. Applesauce was packed in films and processed for 30 min. in boiling water. Each package was about 5 by 3.5 in. in size and contained about 130 to 170 gms. of applesauce. The packaged foods were stored in the constant-temperature and constant-humidity cabinet together with the film mounted on dishes. The mounted film had also been heat treated for 30 min. in boiling water. The packaged foods were laid on screen trays so that all sides of the package were exposed to the dry air in the cabinet. They were weighed weekly for 10 weeks.

Fig. 5. Packaged applesauce after 26 days' storage at room temperature. Lower two packages contained 300 mg. ascorbic acid per lb. of sauce, added at time of filling. Upper two packages, which served as controls, show darkening.



The rate of weight loss in the case of each thickness of film was constant between the first and tenth weeks. The data were calculated on the basis of weight loss in gms. per 100 sq. in. of the package surface per 24 hrs. Only the area which actually enclosed the food was taken into account. The average values are shown in Table III.

These results lead to two conclusions: First, the weight loss of applesauce in the plastic bag was largely governed by the water-vapor permeability of the film. This was distinctly illustrated by the difference in water loss by the packaged food in case of Mylar polyester A and Trithene A. Second, the rate of weight loss by packaged applesauce was more than that which was shown by the water in the dish method.

This may have several possible explanations. One is that the film in a food package is distended and distorted to a certain degree by the contents, which thereby decreases the film thickness and increases its permeability. A second possible explanation is the direct contact of the liquid and the plastic film so that the process of solution which is considered to be the first step in the permeation mechanism is accelerated. A third possible explanation is the hydraulic pressure exerted by the mass of the applesauce upon the plastic bag.

C. Determination of gas permeability as related to heat stability. The results of the gas-permeability measurements presented in Table IV show a close agreement between the data obtained for polyethylene and those presented by Landrock and Proctor for polyethylene. The gas permeabilities of Mylar polyester A and Trithene A were determined before heating and after exposure to steam at 212 deg. F., 230 deg. F. and 250 deg. F. for 30 min.

The oxygen and carbon dioxide permeabilities of both Mylar polyester A and Trithene A were very low. Since the exposure to moist heat did not appreciably alter the gas permeability of the films, the results are not separately shown in Table IV. Also, due to the limitation of the accuracy of the gas analysis in the low range of concentrations, the available data do not allow precise conclusions. Even if there was change in gas permeability due to heat exposure to the above three temperatures, the oxygen permeability for both films did not exceed 50 cc./100 sq. in./24 hrs./atm., while the carbon dioxide permeability of both films did not exceed 65 cc./100 sq. in./24 hrs./atm.

D. Determination of organic-vapor permeability as related to heat stability. From a preliminary study, the Mylar polyester A and Trithene A films showed a very low transmission rate of methyl furoate vapor. A 14-day storage period was used for the above two films, while more than a six-day

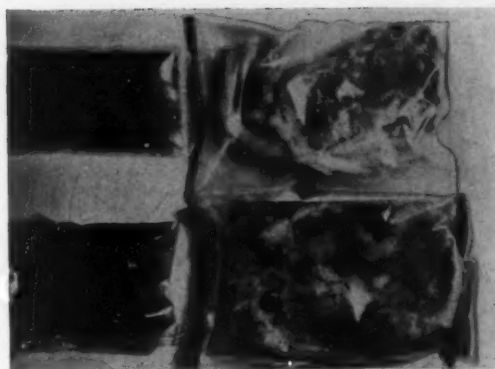


Fig. 6. Appearance of packaged club steak (right) and packaged potato-meat stew after storage for 50 days at room temperature.

storage period was used for cellophane PT-450. Both Mylar polyester A, 200 and Trithene A, 200 films are at least 5,000 times less permeable than cellophane PT-450, which showed a transmission of 0.6 gms. furoate acid per 100 sq. in. per 24 hrs. Exposure of films to 250 deg. F. for 30 min. increased the organic-vapor permeability approximately 50%.

However, resistance of these heated films to the vapor was still relatively very high.

E. Testing for package leaks. Plastic bags used for actual food packaging were tested for leaks. This provided information on the sealing performance and on the pressure differential which the bags can withstand during heat sterilization. The testing method used has been described by Hu and Nelson (6).

Table V shows the net air pressures which caused the bags to leak and their standard deviations. The leaks all appeared at the heat-sealing area. It should be noted that the standard deviation was very

Table IV: Results of gas-permeability determinations

Film sample	cc./100 sq. in./24 hrs./atm.	
	O ₂	CO ₂
Polyethylene, 150*	470	1500
Polyethylene, 240*	370	1000
Polyethylene, 220	385	1337
Mylar polyester A, 200 (with and without heat exposure)	under 50	under 65
Trithene A, 200 (with and without heat exposure)	under 40	under 50

*Data taken from Landrock and Proctor (7.)

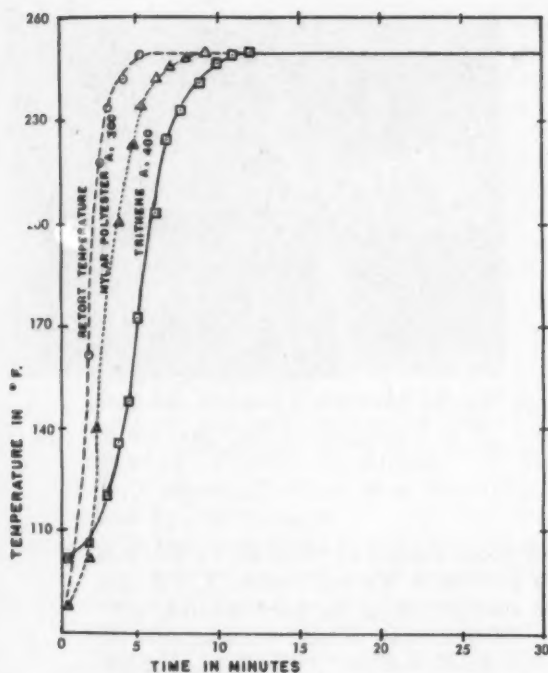


FIG. 7 HEAT PENETRATION CURVE OF POTATO-MEAT STEW IN PLASTIC BAGS

high. This indicates that the seal of the bags used in the experiments lacked uniformity.

F. Acid foods in plastic bags. Applesauce packed in Mylar polyester A and Trithene A films was processed in boiling water for 30 min. followed by cooling in tap water. No fermentation was observed in applesauce packaged in either type of film. A total of 35 packages of applesauce was prepared at different times. However, applesauce packed in both types of films developed a brownish-black discoloration which appeared during storage. This discoloration usually became apparent after five to seven days in storage at a temperature of about 78 deg. F. The intensity of this discoloration increased with time and was accompanied by off-flavor development. Since this phenomenon was of prime importance to the fundamental concepts of the study, an experiment was set up to investigate the discoloration and off-flavor development.

Sample A. Applesauce was prepared, packaged in Mylar polyester A and Trithene A bags, and heat processed. This served as the control.

Sample B. Applesauce was prepared, packaged in Mylar polyester A and Trithene A bags, placed in a tin can and the space between the film-packaged applesauce and the can filled with applesauce. The can was sealed and heat processed.

Sample C. Three hundred mg. ascorbic acid were added per pound of applesauce just before the sauce was filled into the plastic bags. Therefore, the C samples differed from the A samples only in the added ascorbic-acid content.

After 26 days' storage at room temperature, Samples A and C appeared as shown in Fig. 5. The applesauce from the Samples A, B and C was taste tested and the concentration of ascorbic acid in the samples was determined. The organoleptic panel found that the A samples were definitely inferior to the B and C samples with respect to color and flavor (Table VI). Scores for the C samples indicated superiority over the B samples, but it may be questionable whether a significant difference existed between these two groups. No difference of apparent significance was noted between the similar samples packed in Mylar polyester and Trithene A films. Sample C after 26 days of storage contained about one-third of the originally added ascorbic acid. There was practically no ascorbic acid present in Samples A and B after the similar storage period.

The cause of the brownish-black color and off-flavor development in the film-packed applesauce might be due to such factors as the film's chemical composition, light or oxygen. The possibility of the chemical composition of the film causing this phenomenon was eliminated, since B and C samples did not develop the off-color and off-flavor found in A samples. The effect of light was not likely, at least in this experiment, because samples A and C were laid side by side in a covered box. The only reasonable cause appeared to be the oxygen, since the presence of ascorbic acid, an anti-oxidant, in Sample C and the absence of oxygen from the area surrounding the plastic bag in Sample B did prevent the applesauce from developing off-color and off-flavor.

Apparently, the oxygen, which produced the ill effect, largely diffused into the bag during the storage period. This point was illustrated in Sample B,

Table V: Plastic bags tested for leaks

Film from which bags were made	Air pressure starts leaks, in. of water, mean	Standard deviation	No. of bags tested
Mylar polyester A, 200	88.4	42.3	6
Mylar polyester A, 300	101.6	54.2	6
Trithene A, 200	95.5	42.4	6
Trithene A, 400	82.6	19.6	6

which contained no ascorbic acid, but was not exposed to air during storage and showed no off-color and off-flavor development. It is apparent that the oxygen which might have remained in the bag after sealing was not enough to produce the undesirable effect.

From the data obtained, it seems reasonable to believe that nearly all of the oxygen which produced the off-color and flavor came from the air which diffused through the film container during the storage.

Another acid food, tomato juice, was prepared and packaged for observation. Twenty bags were filled with tomato juice. Ten containers were made from Mylar polyester A and another 10 from Trithene A. The sealed containers were heat processed for 30 min. in boiling water. Fermentation developed in 20% of the pack during a 45-day storage period at room temperature. This spoilage was most likely caused by faulty sealing or breaking of the sealing area during the heat processing. The experiment was conducted as follows:

Sample A. Frozen tomato juice was thawed, heated and the plastic container filled at about 160 deg. F., sealed and heat processed.

Sample B. Same as Sample A, but the film-packaged tomato juice was placed in a tin can. The space around the film-packaged tomato juice was filled with tomato juice and the can was sealed and heat processed.

Average color and flavor scores are reported in Table VI. It was apparent that the film-packaged tomato juice when enclosed in a tin can, with tomato juice on the outside area of the film package, retained the bright red color much better than the film-packaged samples exposed to the air. The tomato juice packed in Trithene A was characterized by a brighter red color than the tomato juice packed in Mylar polyester A.

It should be noted that both films were very low in oxygen transmission rate. In the literature, there were no comparable data concerning the oxygen transmission rate on both films. The Trithene A used in this experiment was 1 mil thicker than the Mylar polyester A. If we assume that Trithene A has a lower oxygen-transmission rate than Mylar polyester A, then the color change of tomato juice in Mylar polyester A may be explained on the basis that oxygen diffusion had been extensive enough to cause the off-color development of tomato juice in Mylar polyester A, but not enough to cause a similar problem in Trithene A during the 45-day storage period. This, of course, is speculative and additional work must be done to prove or disprove this assumption.

G. *Non-acid foods in plastic bags.* Thirty plastic

Table VI: Organoleptic evaluation of several foods packaged in plastic bags, heat processed and stored at room temperature

Food	Storage days	Sample (refer to text)	Film used for bag			
			Mylar polyester A, 300		Trithene A, 400	
			Color score	Flavor score	Color score	Flavor score
Apple-sauce	26	A	3	4	4	4
		B	7	8	7	7
		C	8	8	8	9
Tomato juice	45	A	4	5	7	8
		B	8	7	8	9
Potato-meat stew	50	A	7	6	7	7
		B	8	7	7	8

bags, 15 containers made from Mylar polyester A 300 and 15 made from Trithene A 400, were filled with a potato-meat stew at 160 deg. F., sealed and processed 25 min. at 250 deg. F. in the water and air-superimposing retort. Two of the Mylar polyester A 300 and six of the Trithene A 400 showed leakage and spoilage during 50 days' storage at room temperature. The experiment on non-acid food was carried out as follows:

Sample A. Potato-meat stew was prepared, packaged in film and heat processed for 25 min. in the special retort at a temperature of 250 deg. F.

Sample B. Same as Sample A, but the film-packaged potato-meat stew was placed in a tin can. The space around the package in the can was filled with potato-meat stew and the can was sealed and heat processed.

The packaged and processed potato-meat stew which was exposed to air during the 50-day storage period did not show much difference in color and flavor when compared with the film-packaged product enclosed in the tin can (Table VI). The average organoleptic scores, for both color and flavor, were so nearly alike that no real differences could be claimed between A and B samples or the two films utilized. In general, the potato-meat stew products were quite acceptable, both initially and after 50 days' storage period.

For demonstration purposes, three club steaks were packaged in Mylar polyester A 300 film bags and heat processed for 25 min. at 250 deg. F. using 30-32 p.s.i.g. superimposed air pressure. After 50 days of storage at room temperature, they showed no visible microbiological spoilage.

A photograph of samples of club steaks together with the potato-meat stew is shown as Fig. 6.

H. *Heat-penetration* [Continued on page 248]

By Sidney H. Ross,* Eugene S. Rosenwasser† and Leonard Teitell*

Effects of fungi on barriers

Exposure tests on some of the newer material combinations suggest use of fungicide in paper to prevent deterioration

Waterproof barrier materials are extensively used by the military for packaging purposes. They are used as case liners, baling wraps, crate liners, crate top covers, interior shrouds, interior wraps and temporary tarpaulins.

Although the primary function of waterproof barrier materials is to resist the penetration of water, Downs (2)¹ has indicated that a truly waterproof barrier should be reasonably water-vaporproof also, and he showed a relationship between the water and the water-vapor penetration of waterproof barrier materials. He concluded that a material possessing a high degree of resistance to water will also resist penetration by water vapor.

Waterproof barrier materials are described in Government Specification JAN-P-125 (7). Wood (9) has discussed waterproof barrier materials in relation to this specification and proposed revisions.

Wood also pointed out that an adequate barrier material should be available for military applications under tropic, temperate and arctic weather conditions. Since barrier materials may be exposed to world-wide weather conditions, it is important to know the extent of deterioration of these materials resulting from various types of exposure. Wharton (8) has pointed out the necessity for adequate military packaging standards as a result of observations on the battlefield during the Korean conflict.

Since barrier materials usually contain paper or cloth, which are subject to attack by fungi, it is the purpose of the work reported here to determine what effect fungi will have on the properties of the newer types of waterproof barrier materials.

Microbial deterioration of barrier materials, as is also true of other packaging materials, may have several serious consequences.

If losses of barrier action occur, either liquid water or water vapor may gain ingress and affect the contents of the package. If losses in mechanical

strength result, the package may disintegrate upon handling and expose or spill its contents. Further, any micro-organisms growing on the packaging material may act as a source of infection which can spread to the contents of the package where it will grow and affect susceptible materials.

Observations during storage tests of packaged items have indicated that mold on case liners (JAN-P-125) was a major cause of failure of packs in outdoor storage. Rust and corrosion develop on the packaged items due to the admission of liquid water through the liner.

The type of waterproof barrier material most widely used consists of paper, coated or laminated with asphalt, asphalt-rubber blends or asphalt-wax blends. Details of manufacture and specifications are given by Abraham (1). Waterproof barrier material may also consist of paper or cloth, laminated or coated with polyethylene. Downs (2) has pointed out that the polyethylene barrier materials are superior to the asphalts in every way except for cost.

The barriers described above may be reinforced with open-mesh fabric or fibres in order to impart strength and toughness to the barrier. The property of water resistance is imparted to the barriers by the asphalt or polyethylene components. There is more information available regarding the resistance to deterioration of the asphalt-type barriers than there is regarding the newer polyethylene type.

Shema (6) found during World War II that fungi were capable of penetrating asphalt-impregnated and laminated wrapping. Gray and Martin (3) found that a large number of fungi were capable of growing on asphalt-treated paper or its component materials and in order to provide complete fungus resistance, they found it necessary to incorporate a fungicide in the asphalt as well as in the paper.

Scribner and Abrams (5) investigated the effects of mildew on case-lining materials, primarily of the kraft-asphalt laminated type. They found that the base papers and the asphalt-coated kraft decreased in strength, stretch and water resistance following

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¹Numbers in parentheses identify References appended.

Table 1: Identification of barrier materials tested

Sample code	Description of samples ¹
A	Baling (B-1)—30/30 kraft sandwich, 1 mil PE, ² secondary creped, two directions.
B	Baling (B-1)—30/30 wet-strength kraft sandwich, 3 mils PE, secondary creped, two directions.
C	Case liner wrapper (CW-1)—30/30 wet-strength kraft sandwich, 3 mils PE, flat, no stretch.
D	Case liner wrapper (CW-1)—30/30 wet-strength kraft sandwich, 3 mils PE, flat, one-way stretch.
E	Tarpaulin (T-1)—50/50, 25% machine-creped kraft, laminated with rubber-asphalt blend and reinforced with swirled glass fibres.
F	Tarpaulin (T-1)—50/50, 25% machine-creped kraft, laminated with rubber-asphalt blend and reinforced with both scrim fabric and swirled fibres.
G	Tarpaulin (T-1)—30/30 WS kraft laminated with rubber-asphalt blend and reinforced with scrim, secondary creped, one way.
H	Single sheet creped paper containing fungicide, 0.25 to 0.30% copper as copper pentachlorophenate.
I	Single sheet, waxed, creped paper containing fungicide, 0.25 to 0.30% copper as copper pentachlorophenate.
J	Single sheet, flat stock, containing fungicide, 0.25 to 0.30% copper as copper pentachlorophenate.
K	Aluminum foil laminated with PE, reinforced with cotton scrim.
M	4 x 4 Scrimtex, coated on one side with 1½ mils PE, containing fungicide, 0.25 to 0.30% copper as copper pentachlorophenate.
N	Same as M, but with 3 mils PE.
O	Two Cincinnati X-crepe, 4512 wet-strength, treated kraft sheets laminated with 45 lbs. of PE.
P	2.35 lbs. Osnaburg cloth coated with 3 mils polyethylene on both sides.
PE	Polyethylene film, 5 mils.
R	Kraft paper, PE coated on one side.

¹Samples were provided through the courtesy of Robert T. Seith of Mosinee Paper Mills Co. and Howard Weiner of Picatinny Arsenal.
²PE=polyethylene.

exposure to fungi. The presence of sisal fibres, jute scrim cloth or cotton cloth as reinforcing materials caused the barriers to deteriorate more rapidly. It was found that the higher the melting point of the asphalt fraction, the greater was the deterioration due to fungi.

Polyethylene is generally considered to be fungus resistant, as was shown by Klemme and Watkins (4). They did report some fungus susceptibility in the case of low-molecular-weight polyethylenes, but this is not a matter of concern here, since most of the films used in barriers are high-molecular-weight polyethylene.

This report describes the effect of fungus growth

on several newer types of paper-asphalt barriers containing non-cellulosic reinforcing, such as glass fibres, and on polyethylene-coated or -laminated type of barrier materials.

Test methods

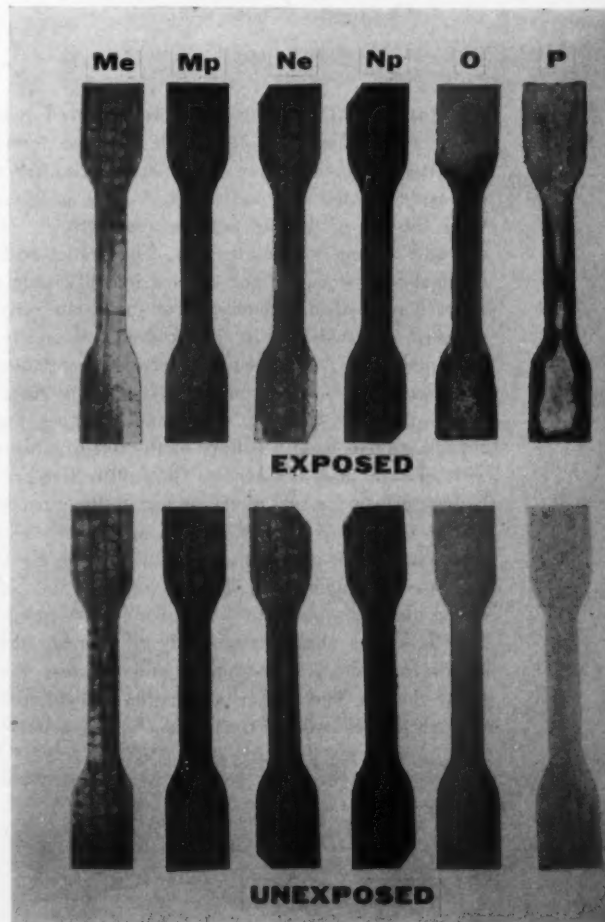
The barrier materials were exposed to fungi by four laboratory methods: (1) placing on an agar medium; (2) suspending in a vessel containing high humidity; (3) placing in a simulated tropical chamber, and (4) burying in a soil bed. The last method exposes the material to other organisms in addition to fungi, such as bacteria and actinomycetes.

The barrier materials that were used in these tests are listed in Table I.

The methods used for exposing the samples to organisms are described below.

(1) *Nutrient salts agar*. Approximately 40-ml.

Fig. 1. Appearance of barrier materials (see Table I for key) before and after inoculation with *Chaetomium globosum* and incubation on nutrient salts agar for three weeks. M and N contain fungicide. Me was incubated with the polyethylene side up; Mp was incubated with the paper side up.



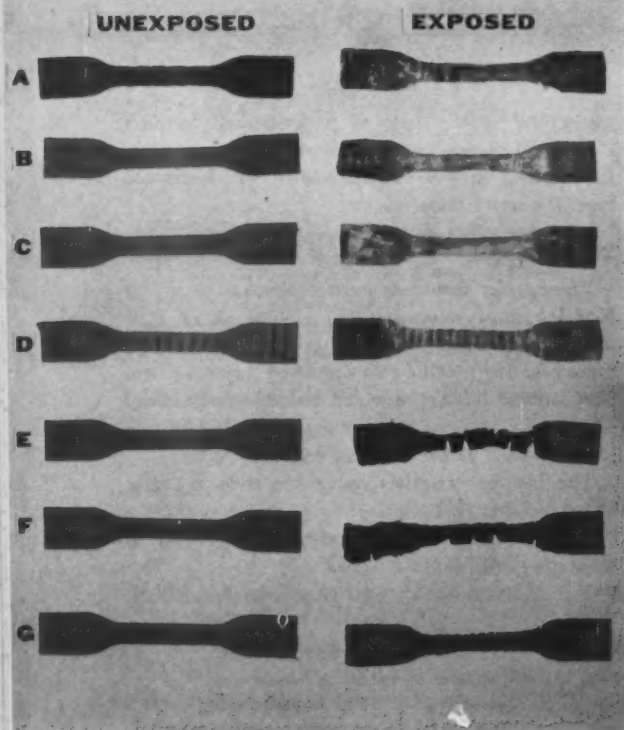


Fig. 2. Appearance of other barrier materials (see Table I) before and after inoculation with *Chaetomium globosum* and incubation on nutrient salts agar for a period of three weeks.

portions of nutrient salts agar² were poured into 16-oz. French square bottles with modified screw caps. A circle about 1/2 cm. in diameter was cut from the center of the cap and a round piece of glass wool, the size of the cap, was inserted between the cap and the cut-out sealing disk. The bottles with the agar were sterilized and allowed to cool on their sides. Dumbbell-shaped tensile-test specimens were punched out with a 6-in. die and placed on the solidified agar. A spore suspension of *Chaetomium globosum* (FA 17)³ was prepared by adding about 5 ml. of sterile distilled water and scraping the surface growth from a culture of the test organism with a sterile platinum needle. The culture was previously grown for two weeks on sterile filter paper on the surface of a mineral salts agar slant. The spore charge was poured into a sterile 125-ml. glass-stoppered Erlenmeyer flask, containing 40 ml. of sterile distilled water and 5 mm. solid glass beads. The flask was shaken vigorously to liberate the spores from the fruiting bodies and to break the spore clumps. The shaken suspension was filtered through several layers of sterile glass wool to remove

² KH ₂ PO ₄	0.7 g.	FeSO ₄ ·7H ₂ O	0.002 g.
K ₂ HPO ₄	0.7 g.	ZnSO ₄ ·7H ₂ O	0.002 g.
MgSO ₄ ·7H ₂ O	0.7 g.	MnSO ₄ ·H ₂ O	0.001 g.
NH ₄ NO ₃	1.0 g.	Agar (Difco)	15.0 g. and
NaCl	0.00 g.	Distilled water	1000 ml.;

ph after sterilization = 6.4.

³FA No. = Frankford Arsenal culture collection number.

any mycelial fragments. The tensile shape test specimens were inoculated by spraying the specimens with the spore suspensions, using a DeVilbiss No. 154 atomizer with 16 p.s.i. air pressure. The inoculated French square bottles were placed in a constant-temperature incubator, maintained at 29 deg. C. and 95% relative humidity for a period of three weeks.

(2) *Humid atmosphere.* Dumbbell-shaped tensile specimens (6 in. long) were immersed in nutrient salts solution⁴ for 1 min., drained and allowed to dry. These were suspended in individual incubation chambers, which consisted of a 1-qt. jar fitted with a plastic screw cap from which the specimen was suspended by means of a piece of chromel wire. The specimens were inoculated by spraying with a spore suspension of *Chaetomium globosum* (FA 17). A temperature of 29 deg. \pm 1 deg. C. was maintained by incubating the jars in a constant-temperature room. The relative humidity was kept at a nominal 100% by adding about a 1-in. layer of water to each specimen jar before sealing it. The specimens were incubated for 12 weeks before breaking-strength determinations were made.

(3) *Simulated tropical chamber.* Specimens were inoculated by dipping them in a suspension of spores in nutrient salts solution. The spore suspension was prepared, using the same general procedure as described previously, except that the following organisms were used: *Chaetomium globosum* (FA 17), *Aspergillus flavus* (FA 70), *Aspergillus niger* (FA 81), *Trichoderma* sp. (FA 69), *Aspergillus versicolor* (FA 483), *Myrothecium verucaria* (FA 29). Separate spore suspensions were prepared, centrifuged, washed, centrifuged and suspended in sterile nutrient salts solution. The spore suspensions were blended to give a final mixture containing approximately one million spores per ml.

The inoculated specimens were suspended in the tropical chamber, which was maintained at the following conditions: 20 hrs. at 95% relative humidity and 85 deg. F., followed by 4 hrs. at 100% relative humidity and 79 deg. F. daily. After three months' incubation the specimens were tested for water resistance.

(4) *Soil burial.* Dumbbell-shaped tensile test specimens were buried horizontally in active⁵ soil beds. The soil beds were composed of equal parts of humus, topsoil and sand, and had a moisture content of 30% based on the dry weight of the soil. The soil beds were kept in the tropical chamber maintained at the conditions described previously. Breaking-strength determinations were made after

⁴Same composition as described for nutrient salts agar, but without agar.
⁵Ten-ounce cotton duck lost 100% of its breaking strength after burial for seven days in these soil beds.

Table II: Susceptibility of barrier materials to fungus growth and effect on breaking strength

Sample code	Description	Fungicide material	Breaking strength unincubated in Controls (lbs.)	Nutrient salts agar test		Humid jar test		Soil burial test	
				3 weeks' incubation	Per cent loss in breaking strength	3 months' incubation	Per cent loss in breaking strength	Per cent loss in breaking strength	Incubation 11 days 3 months
A	Kraft sandwich creped, PE center, 1 mil	None	35.8	++++	96.1	++	65.3	95.7	
B	Kraft sandwich creped, PE center, 3 mils	None	47.8	++++	89.1	++	44.3	86.6	
C	Kraft sandwich flat, PE center, 3 mils	None	57.2	++++	91.6	+++	59.7	90.5	94.1
D	Kraft sandwich, creped one way, PE center, 3 mils	None	50.8	++++	91.7	+++	66.5	89.1	90.2
E	Kraft sandwich with rubber asphalt and glass fibres	None	26.4	++++	100.0	++	73.4	95.6	
F	Kraft sandwich with rubber asphalt, swirled fibres and glass fabric	None	35.4	++++	62.7	++	29.3	78.9	
G	Kraft sandwich with rubber asphalt and scrim center, creped	None	52.6	++++	79.4	+++	80.9	90.6	
H	Single sheet, creped paper	Cu penta*	8.2	0	4.9	0	0	7.5	
I	Single sheet, waxed creped paper	Cu penta*	9.2	0	0.0	0	0	13.9	
J	Flat stock paper	Cu penta*	22.2	0	0.0	0	0	13.9	
K	Aluminum foil laminated to cotton scrim with PE center	None	44.4	++++ ^o	76.6	++++ ^o	68.4	69.8	73.6
M ^a	Scrimtex coated with PE on one side, 1½ mils	Cu penta*	87.2	0	3.4	0	9.5	6.9	
M ^c	Ditto	Cu penta*	87.2	0	4.6				
N ^b	Scrimtex coated with PE on one side, 3 mils	Cu penta*	114.0	0	12.8	0	14.4	2.3	32.9
N ^c	Ditto	Cu penta*	114.0	0	21.2				
O	Wet-strength treated kraft with PE center	None	64.0	++++	90.6	+++	44.9	79.4	96.9
P	Osnaburg cloth coated with PE, 3 mils on both sides	None	70.8	+	88.4	+	76.0	35.9	87.8
PE	Polyethylene film, 5 mils	None						13.1	
R	Kraft paper coated on one side with PE	None							92.8

*Contained copper pentachlorophenate. Concentration was 0.25 to 0.30% Cu.

^aIncubated on agar with polyethylene side up.

^cIncubated on agar with paper side up.

^oFungus growth code:
 0 = no growth
 + = light growth or up to 25% of surface moldy
 ++ = moderate growth, 25 to 50% of surface moldy
 +++ = heavy growth, 50 to 75% of surface moldy
 ++++ = heavy growth, 75% to entire surface moldy.

^oGrowth on scrim side only.

11 days' and three months' incubation, respectively. Water-resistance determinations were made after one, two and four months.

Table II lists the susceptibility to fungus attack of the various barrier materials as measured by the effect on their breaking strengths. Breaking-strength determinations were made according to TAPPI

Method T404 m. 50. All the samples tested, except those containing the fungicide, decreased greatly in breaking strength as a result of fungus attack. The losses in breaking strength after incubation ranged from 62.7 to 100% for the materials in the nutrient agar test.

The largest loss of breaking strength in the sam-

Table III: Effects of fungi on water resistance of barrier materials

Sample code	Description	Water resistance of unexposed controls (p.s.i.)	Soil burial test Per cent loss in water resistance		Tropical chamber exposure, four months	
			Three days	Four months	Extent of growth	Per cent loss in water resistance
C	Kraft sandwich, flat, PE ^a center, 3 mils	>250		0 ^a		
D	Kraft sandwich, creped one way PE center, 3 mils	>250		0 ^a	++	0
E	Kraft sandwich with rubber asphalt and glass fibre	39.5	100		++++	94
F	Kraft sandwich with rubber asphalt, swirled fibres and glass fabric	29.6	100		++++	93
G	Kraft sandwich with rubber asphalt and scrim center, creped	50.4	100		++++	65
K	Aluminum foil laminated to cotton scrim with PE center	>250		0		
N	Scrimtex coated with PE (3 mils) on one side, containing copper pentachlorophenate (0.25 to 0.30% copper)	>250		0		
P	Osnaburg cloth coated with PE, 3 mils on both sides	>250		0	+	0
PE	Polyethylene film, 5 mils	>250		0		
R	Kraft paper coated on one side with PE	>250		81		

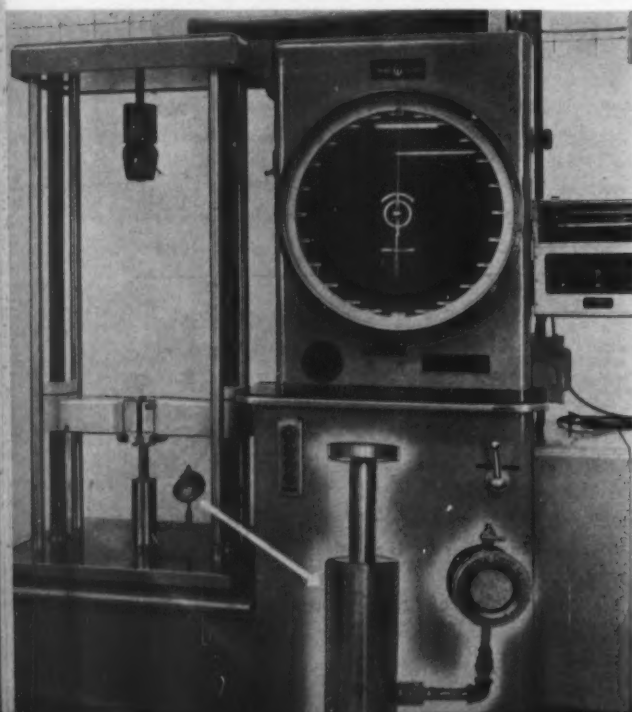
^aThe paper sheets were completely degraded and only the polyethylene film remained intact after soil burial.

^bFor fungus growth codes, see Table II, footnote (d).

^cAn 0 value indicates the sample can withstand a water pressure of over 250 psi.

^dPE = Polyethylene.

Fig. 3. Modified Penescope in position for measurement of water resistance. Inset: Enlarged view of Penescope attached to cylinder.



ples containing the fungicide was 32.9% and this was after a three-month soil-burial test, which is a very severe exposure. Otherwise, the losses were smaller in the group containing the fungicide, copper pentachlorophenate. No fungus growth was visible macroscopically on the samples containing fungicide, while there was moderate to heavy growth on the samples which contain no fungicide.

Whenever heavy fungus growth was present, there was a corresponding loss in breaking strength. Sample "P," which is Osnaburg cloth coated with polyethylene, supported heavy growth on the cut edges with decreasing amounts of growth toward the center (Fig. 1). This is due to the fact that the cut edge exposed a cloth surface which the fungi could use as a food source, thus causing a weakening of the fabric between the polyethylene coatings.

After a three-week exposure in the nutrient agar test, the barriers generally decreased in strength to a somewhat greater extent than in the humid jar test after three months. Exposure in soil burial for 11 days caused severe losses in breaking strength. In the humid jar test and nutrient agar test, small amounts of salts were [Continued on page 237]



Gordon Lippincott, Package Designer, predicts growing trend to automated packaging will broaden use of cellophane

"Recent progress in developing high-speed automatic packaging machines is rapidly changing the course of America's 12 billion dollar packaging business.

"The new Betty Crocker 'Pick-A-Pack,' for instance, represents a highly successful change in cereal packaging. Double-wall Olin Cellophane individual bags maintain freshness, add new convenience. Transparency improves display and impulse sales. And the sealed cellophane bags are produced at high speed on automatic machines.

"As designers, we at Lippincott and Margulies evaluate all materials for both machinability and merchandising value. Olin Cellophane admirably fills both needs. A low-cost item, it has excellent machine-running properties for the new high-speed bag-making, filling, bundling, wrapping, over-wrapping, strip packaging and heat-sealing units. It also offers sparkling transparency for product display and an ideal surface for color printing."



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Q Questions & A Answers

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 575 Madison Ave., New York 22, N. Y. Your name or other identification will not appear with any published answer.

Surface friction of film

Q. *We notice a great difference in the surface gloss and slip of the various brands of polyethylene film and in the various grades of polyethylene-coated papers. We have a specially designed machine that is entirely satisfactory, but will not perform well if materials have too much surface friction. What determines surface friction of polyethylene resins, films and coatings?*

A. The surface characteristics of polyethylene film or polyethylene-coated papers are determined by the conditions of processing, the type of cooling roller or system used, and the additives in the resin. Each of the three groups of factors alone or in combination makes possible a large number of types of polyethylene surface.

When no additives are used in the resin, a high processing temperature and a rapid cooling will produce a glossy film with high surface friction. If a rough-surfaced cooling roller is used, the resulting coating will be dull, but have low friction.

However, the best method of controlling and improving surface slip is by the use of a so-called slip agent in the resin. There are a number of these slip agents, which are used in very small and varying amounts. By the use of slip agents, a polyethylene film or coating can have a high-gloss surface with low friction. If a slip agent is used, you should not have a problem finding films and coatings to operate without drag on your machine.

Rigid, transparent box liner

Q. *We would like to make a liner that will also serve as a window for a transparent rigid set-up box, but we want to be able to ship the liner flat. We now use a paper sleeve with a transparent window, but an all-plastic sleeve or liner would be preferred. How can we make a flat*

sleeve out of a rigid plastic material which is several mils thick?

A. A rigid, transparent plastic sheet formed into a sleeve or three-sided liner cannot be compressed or flattened for shipping. Apparently you have tried thinner and less-rigid samples, but found that these are not so effective for the customers' use. It might be possible to design a three-sided liner that could be scored and shaped, then stacked without danger of breakage.

There are a number of transparent plastic sheetings of different resin types and also different in degree of plasticity. It is suggested that you try several types of sheetings to see if you can find the right combination that will give you rigidity in use and yet stack in sleeve form.

Another possibility would be to supply your customer flat sheets cut to size and have him pass these through a simple, straight-line creasing and forming machine. Such a machine would be simple to build and operate, and could make either a full sleeve or a three-sided liner from pre-cut sheets.

Moistureproof double-fold bag

Q. *We package one of our products in a bag within a folding carton. We can either heat seal the bag top or make a double fold. Our closing unit is designed to make either kind of closure, but we are inclined toward the double fold because it is easier to open. However, the product, which is in the form of small grains, tends to absorb moisture. Can you tell us how the folded closure can be made fairly moistureproof?*

A. A well made double fold held in compression by the carton top can give excellent moisture protection.

You should make up samples with various bag lengths and various carton heights, then have a package

test made with your products in the package. A few heat-sealed samples should be included in the test. The results of this test will show the effectiveness of the fold in relation to the heat seal and also indicate the bag and carton sizes which are most effective. However, you must keep in mind that the double fold must be flat and under compression to prevent sifting and the entrance of moisture.

Pack for tropical shipment

Q. *We are preparing to ship a special effervescent tablet in bulk to a tropical country. Our plan is to use a ring-sealed metal pail with a plastic liner. The tablets will be packaged in layers with a cellulosic cushion between layers. The problem is breakage of the tablets and also absorption of moisture. The tablets are particularly sensitive to moisture pick-up and this can destroy their effectiveness. Can you suggest a better way to make such a shipment?*

A. It would appear that the method of bulk packaging you have described would be effective in insuring the arrival of these tablets in good condition to a tropical country. You should be sure that the pail closure is of a type that will give a strong and moistureproof seal. The plastic liner should also be well sealed as an additional moistureproof barrier. However, there is a possible danger in using cellulosic pads, since these pads could introduce an appreciable amount of moisture. This danger could be eliminated by using predried pads, but an additional precaution would be to use a quantity of a desiccating agent. There are many kinds of desiccating agents that would serve this purpose and their presence would guarantee that the tablets would not absorb moisture. This precaution plus a tightly sealed metal pail should insure a safe arrival even for a tropical shipment.

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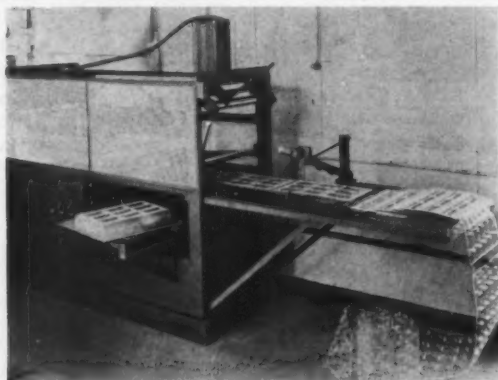
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DU PONT CEL-O-SEAL BANDS

REG. U. S. PAT. OFF.

Equipment and materials

New machine for making blister or skin packs has been introduced by The Auto-Vac Co., 1987 State St. Ext., Bridgeport 5, Conn. It may also be used for low-profile drape-forming applications, such as food containers. The new Skin-Pak machine uses rolls of cellulose acetate,



butyrate, vinyl, polyethylene or polystyrene, up to 22 in. wide and 0.030 in. thick, and has completely automatic forming operation and a device for pulling the formed plastic away from the molding area and simultaneously cutting the previously formed section from the roll. Rate of operation is reported to be two 20-by-25-in. cards with multiple products per minute for skin packaging and three 20-by-25-in. formings per minute when used with 0.010-in. cellulose acetate for forming over molds.

A divisible cubical fibre can

for ice cream announced by Sefton Fibre Can Co., sub. of Container Corp. of America, 3275 Big Bend Blvd., St. Louis 17, Mo., has a pull-string divider half way up the sides. Thus, when half of the 2-qt. container's contents is consumed, the string can be pulled to cut the can in half. The square metal cover will fit on top of the remaining section.



The body of the new container carries a printed label which can be used for full-color design reproduction and the metal lid can be lithographed with sales message, brand name, flavor or other legends.

Custom-molded cellulose containers

for protective industrial packaging are offered by the Tek-mold Products Plant of Bemis Bro. Bag Co., 408 Pine St., St. Louis 2, Mo. Called Ship Shapes, they are molded from cellulose pulp to give either partial or over-all protection (illustrated) to nest fragile parts between pulp cushions.



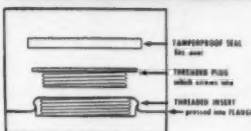
They are designed for packaging such things as glass electrodes, filled ink tubes, laboratory instruments, china, etc. Bemis has also introduced a new sewn multiwall paper shipping sack that features a reinforced end construction consisting of strips of kraft paper between the plies at the bag's top and bottom. These reinforcements are said to give the effect of an extra ply at the points where most sewn multiwall

bag breakage occurs. Thus, the "strength-end" construction can either be used to increase bag strength at critical points at less cost than adding an additional ply of paper, or reduce bag cost without sacrificing too much strength. The reinforcing strips are spot pasted to adjacent plies to hold them in position as integral parts of the construction, in either sewn-valve or open-mouth bags.

A new polyethylene fitting for steel drums

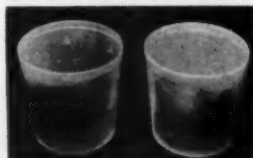
announced by Uppressit Products Corp., Danbury, Conn., is reported to be the first universal fitting that will accommodate all types of standard 2-in. plugs for 55-gal. drums. Installation and changing

are said to take only a few seconds, with a special insert tool. Working on the principle of polyethylene-to-polyethylene contact for a tight seal without gaskets, the "Polly-Press" fitting consists of a threaded polyethylene insert which is pressed under the flange of the drum opening, a threaded polyethylene plug which fits into this insert and a tamper-proof metal seal which fits on top. Among the advantages claimed for the new seal, in addition to its lighter weight, are the elimination of the crimping operation, which may crack protective liners, and removal of any danger of sparks being caused when metal caps are applied to drums used for flammable materials.



A new polystyrene molding compound

announced by the Plastics Div., Monsanto Chemical Co., Springfield, Mass., is said to combine successfully high clarity and high impact strength. Known as Lustrex Hi-Test 88B, it is recommended for packaging food and other products for which these properties are desirable for both visibility and durability. In



the illustration, the container on the left was molded from the new Lustrex Hi-Test 88B and has clarity said to be 50% greater than the one on the right, which was molded from ordinary high-impact polystyrene.

A single-service liquid pouch



introduced by Cheslam Corp., 684 Nepperhan Ave., Yonkers 2, N. Y., is designed to package pure cream at the dairy. It features a controlled-flow "S-Spout" which functions as a channel sealed into the top of a pouch made from Cheslam's Cellothene polyethylene-coated cellophane. The channel may be opened by tearing a partly slit section along a perforated line, thus exposing the mouth of the spout. When the spout is held downward, slight pressure forces the contents through the channel and out in a narrow stream; when pressure is released, the flow is stopped and dripping curbed. Special liquid packaging equipment available from the manufacturer can automatically form, measure, fill and seal the pouches in

All of these drums in the Pemex storage shed were completely immersed when the Panuco River overflowed.

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drums were immersed for 6 days



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Two of the severest hurricanes in years—Hilda and Janet—recently hit Tampico, Mexico. Terrific floods tore away and crumbled the massive cement docks of the Petroleos Mexicanos refinery, and immersed over 600 Pemex oil drums, all of which were equipped with Tri-Sure® Closures.

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Equipment and materials

single-portion sizes from $\frac{1}{4}$ to 3 oz. The transparent film may be printed on the outer surface by flexography or rotogravure, or the printing can be locked between the cellophane and polyethylene layers.

Cellulose wadding for industrial uses

is being produced by the newly formed Cel-Fibe Div. of Personal Products Corp., Milltown, N. J., a Johnson & Johnson company. For packaging purposes, it is laminated to flexible sheets of corrugated board for spot-cushioned inner packing and completely interior-cushioned shipping containers, to protect finished surfaces from scratching, marring and abrasion. The Cel-Fibe wadding is also designed to suspend and buffer delicate or odd-shaped items, absorb liquid leakage in transit, insulate perishables, etc. It is available in rolls or cut sheets, plain or embossed, backed or unbacked, and can be readily glued, die cut, sliced, stitched, seamed or scrolled. The sample illustrated was fabricated by Eastern Corrugated Container Corp., Clifton, N. J.



It is available in rolls or cut sheets, plain or embossed, backed or unbacked, and can be readily glued, die cut, sliced, stitched, seamed or scrolled. The sample illustrated was fabricated by Eastern Corrugated Container Corp., Clifton, N. J.

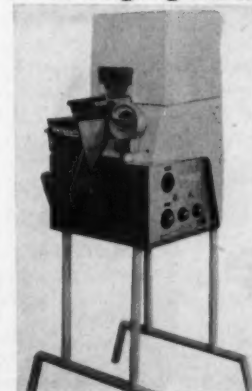
A new polyethylene fitment for bottle necks

to protect against spilling and dripping of the contents and give faucet-like control over flow has been announced by Latchford Marble Package & Supply Co., 1849 N. Main St., Los Angeles. Called the "Topper," the fitment has a small central pouring spout surrounded by a drain-back well. A small tube at the bottom of the well leads down into the bottle and serves to introduce air into the container, thus making it possible to pour with equal efficiency from any side of the bottle mouth. The Toppers are available in several sizes and may be applied manually or by automatic equipment. They are particularly recommended for such products as liquor, wines, liquid detergents, syrups, salad oil, etc.



A new weighing and filling machine,

the Trescomatic Model B, has been introduced by The Trescott Co., Fairport, N. Y. It has a vibratory-type weigher with fast feed and dribble finish and an electronically controlled scale reported to be accurate to $\frac{1}{16}$ oz., with a range from 1 oz. to 6 lbs. Three types of weighing heads are available and the vibrator may be fed from either a gate-controlled supply hopper mounted directly over it or from an adjustable elevator. The dial of the scale is visible and a check-weigh button makes it possible for the operator



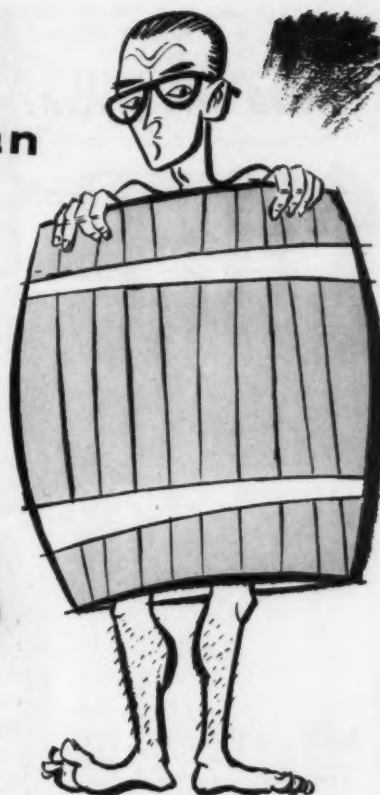
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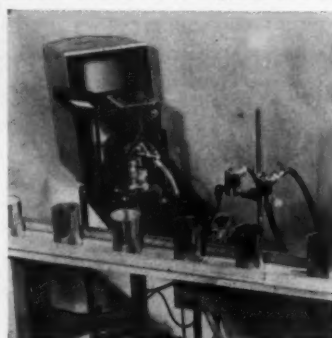
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Equipment and materials

to retain a weighed load in the dump hopper for a check on its weight. The filler is said to be adapted to use on a wide range of objects, such as small machine parts, candy, nuts, meal, powders, fertilizer, grass seed, etc. Speeds up to 30 packages per minute are reportedly possible, depending on the nature of the product.

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for automatically dispensing liquid or viscous materials in amounts from 1 cc. to a gallon at a time at speeds up to



290 per minute has been announced by C. W. Logeman Co., 633 Bergen St., Brooklyn 38. The adjustable pumping device is said to fill without waste and is actuated by a specially designed switch that is tripped by moving containers, filling only when a container is present. It is recommended for the

addition of small amounts of such ingredients as salt, monosodium glutamate, aromatic oils, etc., and for the filling of single-portion packages.

A tough new plastic film

announced by Minnesota Mining & Mfg. Co., 900 Fauquier St., St. Paul 6, Minn., is said to be the first durable plastic packaging material to have the strength and resistance to oil found in polyester films and the resistance to corrosive fluids and heat-sealable properties of polyethylene films. It is designed for use in the packaging of everything from acid to precision machine parts in heat-sealable bags. The film is chemically inert, non-toxic and has "excellent resistance to boiling, moisture and gas permeation," and can be used for dry or wet packaging of machine parts with critical surfaces. Heat sealing can be accomplished at 275 to 300 deg. F., at 10 to 60 p.s.i. jaw pressure with a half to two-seconds dwell. Tensile strength is greater than 15 lbs. per inch of width. The film is available in widths up to 22 in. and a thickness of 4½ mils, with prices running several times that of cellophane.



Indicator for revealing in-transit damage

has been developed by A. Latter & Co., Ltd., Croydon, Surrey, England. It is designed to provide a visible indication that a shock in excess of a predetermined maximum has possibly damaged goods which have been packed for shipment, even though the outer container may not show visible signs of bad handling. The Latco Shock Indicator consists of four springs mounted in pairs on a plastic base, with a small metal ball held in place between each pair of springs. The whole assembly is protected with a transparent cover. The tension of each pair of springs is adjusted so that the balls will be released when it has received a certain intensity of continuous shock. The indicator weighs only

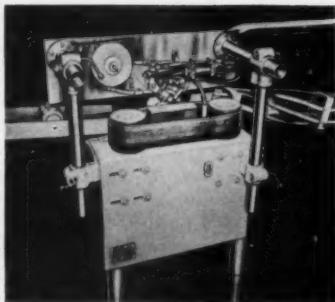


about $\frac{3}{4}$ oz. and can be attached to the outer container of a packed article, or beneath a transparent window in its outer covering. Indicators are available in settings of from 5 to 300 "g" as measured on a centrifuge.

A new machine for attaching outserts

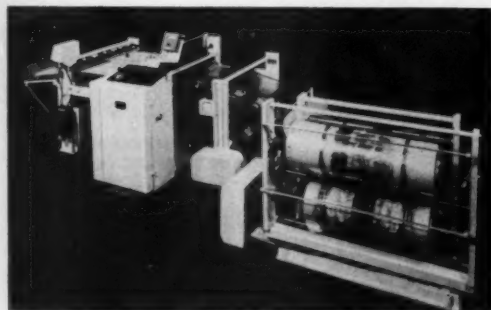
to containers has been announced by The Pfaudler Co., 1012 West Ave., Rochester, N. Y. The company's new Outsert Applicator is designed to attach a leaflet or sales message precisely where it belongs on the outside of a package at rates up to 220 containers a minute. It can be used on any cylindrical glass, metal, plastic or paper container that has a length of $2\frac{1}{4}$ to $7\frac{1}{4}$ in. and an outside diameter of $1\frac{1}{4}$ to $6\frac{1}{2}$ in., and occupies only 4 sq. ft. of floor space.

When free-rolling containers are ready to leave the labeling unit and enter the outsert machine, they are gripped by parallel belts to stop rotational motion. Pre-set adjustments then face up the proper point on the container, an outserting mechanism lays the outfold in position and a tape dispenser feeds the right length of tape to affix the outsert firmly in place.



A side-welded polyethylene bag maker

has been introduced by The G. T. Schjeldahl Co., Northfield, Minn., known as the Model 40-40. Under the Schjeldahl side-weld method of construction, two layers of poly-



ethylene film are welded together by a hot knife at the sides to give a neat, rugged seal and permit end-around and identical front and back printing of the bag. Bags can also be made with a lip to facilitate rapid filling. The new machine has a capacity for bag sizes from 2 by 2 in. to 40 by 40 in., at speeds from 40 to 120 a minute.

A new kind of package for bacon

which is said to be airtight, moistureproof and greaseproof has been announced jointly by Western Waxed Paper Div., Crown Zellerbach Corp., San Leandro, Calif., and Cryovac Co. Div. of W. R. Grace & Co., 62 Whittemore Ave., Cambridge 40, Mass. It is designed to hold $1\frac{1}{2}$ lbs. of slab-packed, thick-sliced bacon, cut in half-slices. Package, measuring $5\frac{1}{4}$ by $4\frac{1}{4}$ in., is formed of greaseproof wax-laminated board, die cut in a single piece. The under side is solid, three sides are open and a window-type top, which can be color printed for brand



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Daily News Record

Container Credited With Sale Rise



The knitting-box type acetate cylinder, pictured above, was described as an important factor in creating sales for nylon tricot sheets and pillowcases by George Stevenson, sales manager of the Utica-Mohawk Division of J. P. Stevens & Co., Inc.

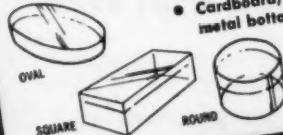
After four to six weeks on

retail shelves, the new sheets have been reordered in large quantities, according to Mr. Stevenson. He said that not only was the package a good way of attracting consumer attention, but that it was also very successful in selling the new product to store buyers.

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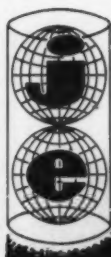
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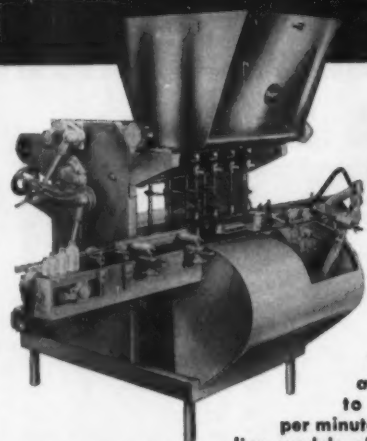
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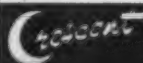
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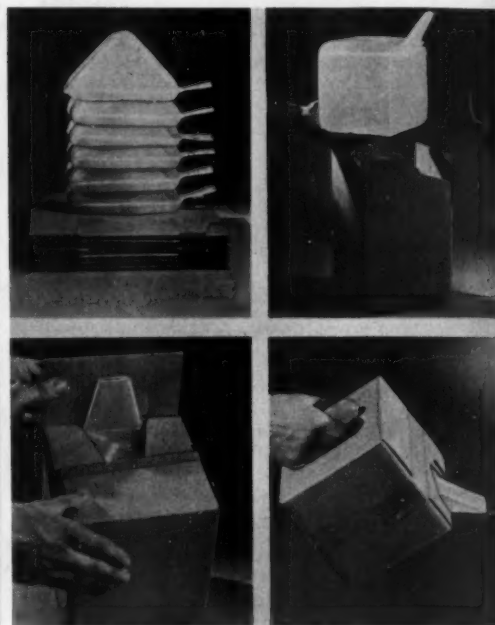
1000 N. 1st St., Philadelphia 19107, Pa.
2000 W. Main St., Milwaukee, Wis.
2000 E. 1st St., St. Louis, Mo.

Equipment and materials

identity, gives visibility to the bacon slices. This waxed-board unit is folded over the bacon, then placed in a Cryovac film bag, vacuum packed and sealed with a metal clasp, the board helping the package retain a rigid, uniform shape.

A cube-shaped polyethylene insert

for shipping and storing foods, chemicals, acid and alkalis has been developed by Hedwin Corp., 1600 Roland Heights Ave., Baltimore 11, Md., using Bakelite polyethylene. Called



the Cubitainer, the new one-way shipper is semi-rigid and designed to be fitted inside an outer carton of corrugated paperboard, to package products requiring protection against contamination, corrosive action or moisture. The packager receives the polyethylene inserts collapsed and stacked (photo, upper left) and cartons folded flat; then the Cubitainers can be inflated by air pressure on conventional packaging equipment and inserted into the set-up carton (photo, upper right). Finally, the insert is filled, the spout heat-sealed shut and folded flat, and the carton sealed (photo, lower left). After shipment, the user pulls open die-cut flaps in the carton to form a handle and expose the spout, which is cut open partly or completely for pouring out the liquid (photo, lower right). At present, 1-qt. and 1-gal. Cubitainers are available; a 5-gal. size is planned.

A redesigned half-gallon milk bottle

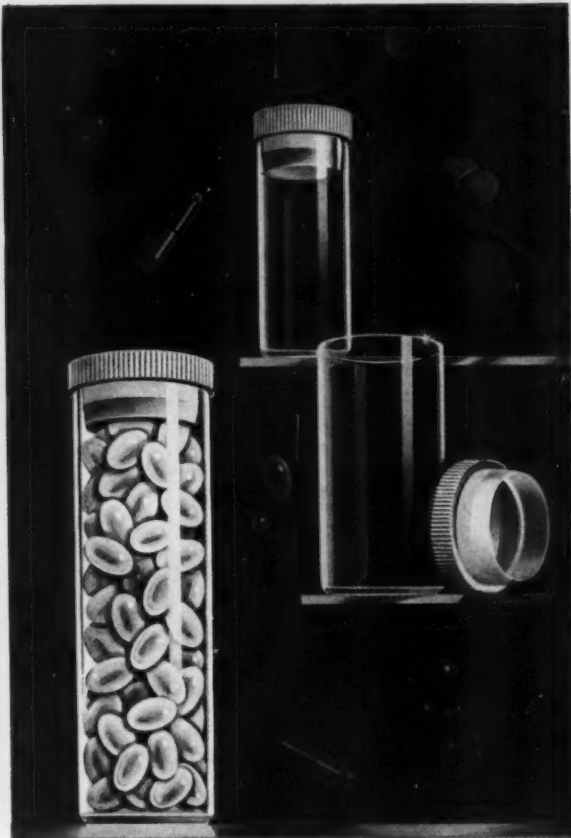


in which the shoulder contours have been changed to permit the application of a larger applied-color design has been introduced by the Dairy Container Div., Owens-Illinois Glass Co., Toledo 1, Ohio. Other body specifications—width, thickness, height and diagonal—have not been altered, but designs may now be applied all around the shoulder in one

NOW...every dry product can have the sales plus of sparkling glass containers



Kimble Opticlear Vials are available in 1, 3, 5, 7, 10, and 12-dram sizes. The tooled neck of the vial and special stopper provide positive protection against moisture-vapor transmission.



Kimble Opticlear Shell Vials are available in 1, 2, 3, 4, 5, 7, 10, and 12-dram sizes. Note that the polyethylene stoppers are hollow, providing more room for contents.

KIMBLE OPTICLEAR VIALS...KIMBLE OPTICLEAR SHELL VIALS
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YOU CAN GIVE your dry products the sales advantages of a sparkling-clear glass container—no matter what your cost requirements.

Kimble Opticlear Vials are the aristocrat of all packages. They are the finest glass containers available anywhere... are first choice by leading companies whose products demand an unusually fine and exceptional container.

Kimble Opticlear Shell Vials are

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Both of these Kimble Vials have crystal-clear clarity, gleaming beauty, unusually high moisture-vapor resistance. They are light and sturdy. The sparkling clarity of the glass provides perfect vision of contents, permits labeling either inside or outside.

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Decide now to give your dry products the advantages of sparkling glass containers. Write for information, prices and free samples. Kimble Glass Company, subsidiary of Owens-Illinois, Toledo 1, Ohio.

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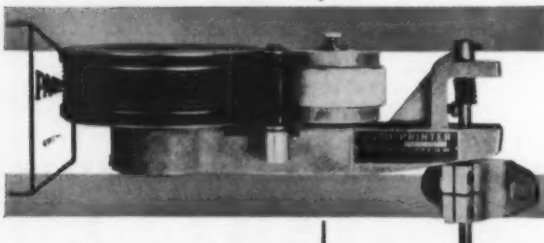
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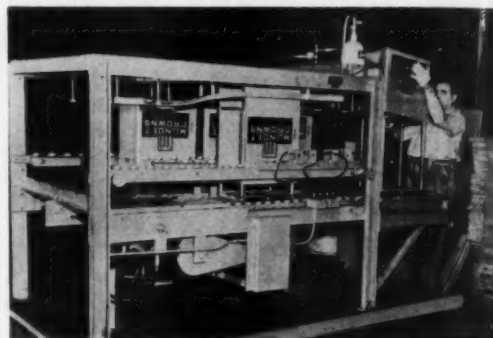
INDUSTRIAL MARKING EQUIPMENT
454 BALTIC STREET, company, inc.
BROOKLYN 17, N. Y. MAin 4-2601

Equipment and materials

operation. Owens-Illinois has also announced the availability of side-panel ACL designs up to 1½ by 3½ in. in size for oblong half-gallon bottles.

A new gluer for bottom flaps of cartons

which can be operated by one man has been announced by General Corrugated Machinery Co., Palisades Park, N. J. The operator drops an open-end carton over a dummy

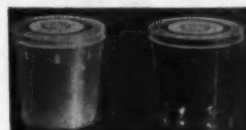


and rolls it forward into the machine, where controlled lines of glue are applied to the inner flaps, which have been folded to flat position. The top flaps are then automatically closed down and the carton glued in place and pressure applied. The finished carton then is delivered to the operator's table, where he removes it from the dummy. Closed glue system eliminates exposed glue pots and rolls.

A line of transparent polystyrene containers

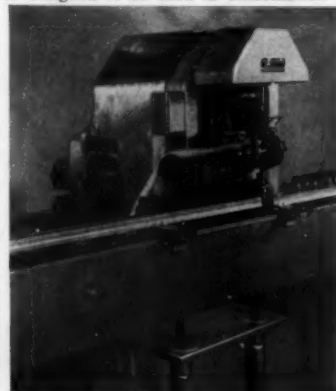
introduced by Hi-Pak, Inc., 3135 W. Grand Ave., Chicago 22, is available in clear, crystal or transparent high-impact polystyrene. Designed for

packaging ice cream, cottage cheese, gelatin desserts and similar products, they are equipped with pliable polyethylene lids which may be printed or labeled, as desired. They are said to be adapted to conventional dispensing, filling and capping machines.



A new cottoning machine,

Model 52, introduced by The Lakso Co., Fitchburg, Mass., is designed to be used in combination with the company's



automatic tablet-counting machines, to package a variety of tablet and capsule bottles at a speed of 60 to 80 per minute. Cottoning is accomplished in a single-motion station, with bottles stopping against a fixed bottle stop, where a cotton coil, cut to desired length by knives, is insert-



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Coated up to 92" wide



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CUSTOM COATED
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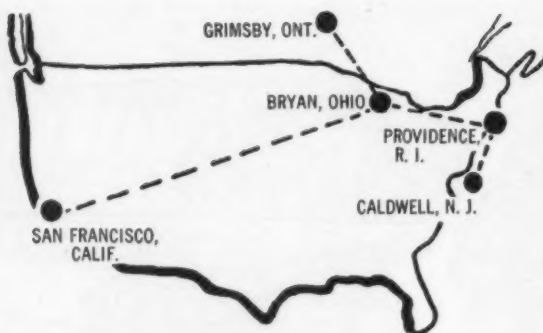
Mr. Advertiser: Good color can work wonders for your corrugated point-of-purchase merchandisers. To be good, it must be brilliant and uniform, light-fast, insoluble, scuff-resistant, and perfectly printable. You can get that kind of color, and white too, when the Kraft Liner is coated by Ridgelo. Much better than when inks or dyes are used... so much richer and more opaque!

Mr. Corrugator: You can make and sell more and better corrugated merchandisers, at lower production costs, with Ridgelo clay-coated Kraft Liner. No other mill matches our 92-inch air knife equipment for this service, permitting your use of full size rolls on any corrugating machine. And none is better located for prompt deliveries in the heart of the eastern industrial area. Give us a call for interesting facts and figures!

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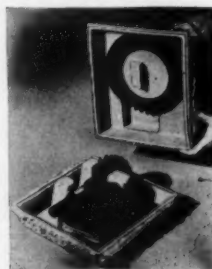
CLAREMONT WASTE MANUFACTURING COMPANY
The Country's Largest Manufacturer of FLOCK
CLAREMONT, NEW HAMPSHIRE

Equipment and materials

ed by a plunger tube above the bottle. The unit is mounted on a portable table equipped with casters which can be placed over existing conveyors. Coil cotton or synthetic fibres 3, 4, 5½ and 7 in. long can be loaded into bottles with neck finish ranging from 18 to 44 mm.

Pulp molds for industrial packaging

are now being designed and manufactured by the Arvey Corp., Fibre Forming Div., Olean, N. Y., under the trade name "Fibre Forms." The molds, available in a wide range of shapes, thicknesses and sizes, are made from waste news, kraft, cane and other fibre materials. They may, if desired, be treated for extra strength, waterproofness, oil resistance or other special qualities. Among the suggested uses are for the protection of furniture, appliances, automotive parts, glass and ceramic products, electronic equipment, etc., with each package being individually designed and engineered to hold its contents snugly, with firm support and without wrapping or other packaging materials being needed.



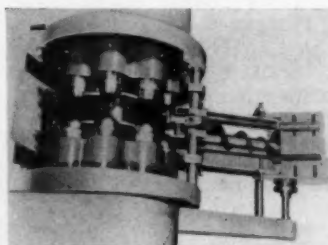
Shopping-cart displays for perishables,

announced by Fuller Displays, 5-39 48 Ave., Long Island City, N. Y., are designed for holding foods or beverages requiring refrigeration. The specially treated fibreboard bins are insulated for maximum temperature control and fit all standard-size shopping carts. They may also be used separately on check-out counters, or moved about to traffic areas and hot spots in supermarkets, without danger of product spoilage. They may be used with wet or dry ice or canned refrigerants.



A new feeding mechanism for can making

has been developed by E. W. Bliss Co., Hastings, Mich. The spiral-type feeder is designed for use with Bliss' new



No. 1315 flanger, to locate can bodies accurately in the flanger at better than 500 cans per minute. It is reported to eliminate the tendency of can bodies to "cock" or "mislocate" when gravity fed at high speeds, since it

eliminates the cause of jams and spoiled bodies whether the



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Just as today's tireless doctors, nurses and medical researchers work to protect you and your family from sickness and disease—J&L Steel Containers protect your products by providing dependable packaging that assures safety in transportation and storage. Precise fabrication provides accuracy in all fittings and closures.

J&L drums and pails are chemically cleaned and dried by the JaLizing process. This assures a clean and dry, rust-inhibiting surface and increases the adherence and durability of decoration and interior lining.

Special protective interior linings are available to provide the best possible packaging for your products.

Jal-Coat, J&L's lithographing process, applies your trademark and sales message to the finished container . . . *no side seam touch-up is ever required.*

Plants located at Atlanta, Ga.; Bayonne, N. J.; Cleveland, Ohio; Kansas City, Kansas; Lancaster, Pa.; New Orleans, La.; Philadelphia, Pa.; Port Arthur, Texas; and Toledo, Ohio.



J&L's Utility Pail stacks and ships without carton. Head design assures continuous pouring. A variety of openings are available.



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MEET

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Equipment and materials

cans arrive at intervals or in a steady stream. The spiral (shown here with cover removed) is of the accelerated type to separate the cans and is chrome plated and polished to prevent damage to can bodies. It is capable of feeding several different can sizes.

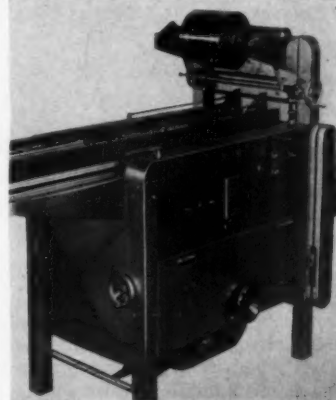
A small filler for liquids and semi-solids



only 45 in. in length, is 29 in. wide and 63 in. high.

such as food products, cosmetics, paints, adhesives, oils, etc., has been announced by Hope Machine Co., 9400 State Rd., Philadelphia 14. Model 15MS is particularly designed for small operations, pilot runs and laboratory testing, operating at a speed of 12 to 25 strokes per minute at a capacity up to 1 qt. per stroke. The machine can fill containers ranging from $\frac{1}{4}$ to 32 oz. in capacity and features a micrometer-type full-range quantity adjustment of the piston stroke while it is running. It measures

A new type of wrapping machine



parts in a minimum of time. The machine can handle packages ranging from $\frac{3}{4}$ to 3 in. in height, $2\frac{1}{2}$ to 8 in. in width and 5 to 12 in. in length, and occupies a floor space of only 27 by 93 in.

for producing "seamless" overwraps has been developed by Schooler Mfg. Co., 101 W. Magnolia Blvd., Burbank, Calif. It is designed for wrapping cartons so that a full panel is available for copy on all sides. It is reported to feature extreme ease in change-over, which can be accomplished without special tools or change

A new heat sealer for blister packs

called the Prox-sealer has been developed by Pyroxilin Products, Inc., 4851 S. St. Louis Ave., Chicago 32. The compressed-air activated heat-sealing machine, built for continuous small-scale operation, is reported to heat seal the preformed "blister" to the desired base



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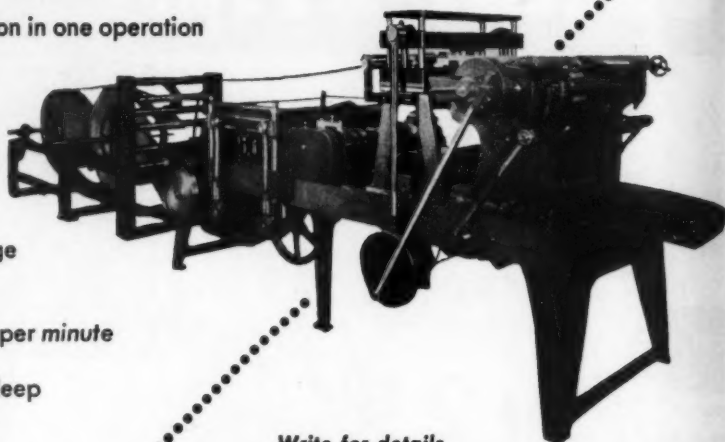
CHICAGO 7, ILLINOIS

Taylor 9-5400

Eliminate costly hand-made partitions

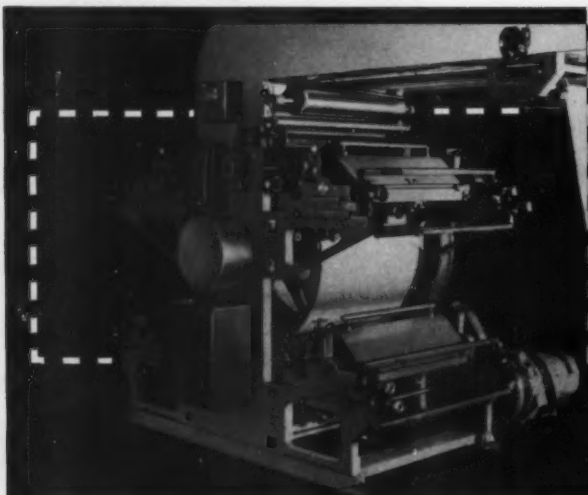
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Here's a view of the "business" end of a new MANHASSET flexographic printing press... specially designed to meet the needs of its user.

This press has four color stations grouped around a big central impression cylinder, providing accurate register control for stretchy films and papers. Push-button operated for maximum efficiency, this new MANHASSET press is equipped with instantaneous electronic variable speed drive... permits stall and running constant web tension control. It is designed to turn out quality printing at high speeds, to operate at peak efficiency under rigorous production schedules.

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Equipment and materials

in about 6 sec. at 350 deg. F., with the user supplying his own template of either plywood or metal.

A portable power stapler for cartons



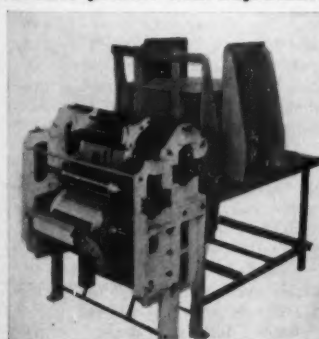
developed by The Fastener Corp., 860 Fletcher St., Chicago 14, weighs only 38 lbs. and is operated by foot power.

Called the Duo-Fast Stapler, the unit is equipped with various stapling heads for different types of jobs and is available in a post model for stapling carton bottoms or in a straight-arm model for telescopic-type cartons or corrugated fillers. An air-operated model is also available. The entire line is reported by the manufacturer to be low in cost.

Two new can-handling machines

have been announced by the Shuttleworth Machinery Corp., Warren, Ind. A portable unscrambler for taking piled-up cans from a conveyor or unloader, tilting them on end and delivering them in single file is designed for gentle handling to prevent denting. It is provided with adjustable casters to make it portable from one labeling machine to another. The company has also introduced a crate unloader which receives a retort crate containing cans from a dolly or conveyor. The crate is set on a platform, a cover drops over it and the entire section—platform, crate and cover—is lifted to a vertical position from which the cans roll gently into a hopper.

An auto-printer with adjustable stacking guide

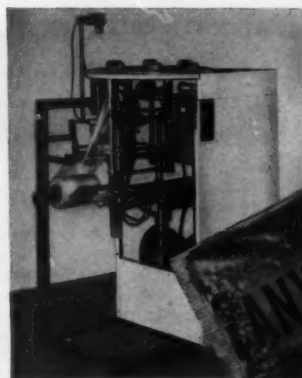


for automatic feed has been introduced by Industrial Marking Equipment Co., 454 Baltic St., Brooklyn 17. It can be used for imprinting, coding, dating, addressing or identifying the contents of knocked-down fibreboard or corrugated shipping cartons, or multi-wall bags, operating at a rate of 50 impressions per minute.

The unit is adjustable to the size and thickness of the containers to be imprinted and can be fitted with a consecutive numbering attachment.

Multiwall bags with 'tilted' valves

have been announced by Arkell & Smiths, Canajoharie, N. Y. Using this principle, the valve alters the flow of material during filling, thus forcing the valve upward and closing it, to eliminate sifting both during and after the filling process. The "tilted" valve is also said to facilitate fitting the bags onto filling spouts.



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Plants and people

Donald D. Pascal has been elected executive vice president of National Starch Products, Inc., to succeed the late A. A. Halden. William C. Buffing has been elected company treasurer.



Pascal



Schaub

Berkley V. Schaub has been elected president of National Adhesives (Canada) Limited.

He was formerly vice president in charge of operations at Toronto and is president of the Packaging Assn. of Canada.

Richard K. Shelby has been appointed assistant to the executive vice president of the Non-Metal Divisions of Continental Can Co., New York. Mr. Shelby will headquarter in New York and engage in coordinating and developing plastic projects and products of Continental's various divisions. Prior to joining Continental, Mr. Shelby did independent research and development on forming rigid film for packages.

Lauren C. Dudley has been appointed district sales manager for the Houston, Tex., district of Continental Can's Metal Division.

An executive committee of six directors of Robert Gair Co., Inc., New York, has been elected by the board of directors to exercise certain of the functions previously performed by the board itself. Executive committee members, all directors, include George E. Dyke,



Duerr

chairman and president; Raymond F. De Voe, senior vice president; Robert L. Fitts, vice president in charge of kraft bag and paper operations; Harry E. Collin, Collin, Norton & Co.; Hugh C. Laughlin, executive vice president of Owens-Illinois and Parker Newhall, of Kelley, Drye, Newhall and Maginnes. All company officers were re-elected with the exception of Wilbur F. Howell, secretary, who had resigned this office but will continue with the company on special assignments for the president. Joseph W. Duerr, former assistant secretary, replaces Mr. Howell as secretary. Hugh C. Jenkins and James A. MacKenzie were elected assistant secretaries.

Lynch Corp., Anderson, Ind., manufacturer of packaging machinery, has acquired all the stock and business of the Counsel Machine Co., Inc., Wall-

ington, N. J. The Wallington operation will operate as the Lynch-Robo Corp., a wholly owned subsidiary and separate division of Lynch. Lynch thus has acquired the specialized line of conveyors and lifts for food processors and packers known as "Robo-Lifts" and the New Jersey firm's "Robo-Wrap" automatic high-speed bag-forming, filling and sealing machine. Lynch-Robo Corp. will continue to operate the plant in Wallington, which will also house the Eastern district sales and service offices of the Lynch Package Machinery Div. Directors of Lynch will become directors of Lynch-Robo Corp.

Cochran Foil Co., Inc., has appointed Merrill A. Grogel as general manager of the Products Division, responsible for all phases of manufacturing, selling and



Grogel

development of rigid foil container and household foil products made by the division. Cochran recently expanded its Products Division to accommodate the demand for frozen-foods packaging. Cochran Foil has appointed J. B. Gage and K. W. Foster as district managers in Cleveland and Chicago, respectively. From his new headquarters at Rocky River, Ohio, Mr. Gage will be responsible for sales of the company's foil rolling and laminating divisions in Ohio, parts of West Virginia, Maryland, Pennsylvania, New York and Michigan. Mr. Foster will have similar responsibilities, serving parts of Illinois, Indiana and Michigan and the states of Wisconsin, Iowa, Minnesota, South and North Dakota.

A new \$1,000,000 plant, equipped to do all types of flexible packaging, is now in operation by the Amos-Thompson Corp., Edinburg, Ind., according to Dale Amos, president of the firm.



Amos



Moran

Initially the new plant will produce flexible products of polyethylene extruded on cellophane, foil, pouch and other papers, and free poly film. These will be made in a wide range of gauges, in rolls, sheets, bags or pouches—either plain or printed in up to six colors by flexography. The first extrusion line will have a 3,000,000-lb. capacity. Sales manager of the new Amos Packaging Division is Hamilton Moran, who has had some 20 years of experience with major converters in the foil, film and

paper field. Production manager is Gene Lowey, formerly of Shellmar. Plans call for a fully equipped testing laboratory and a design staff.



Scoble

will supervise European operations. Robert R. Wechsler becomes executive vice president.

Work is nearing completion on the new garden-type factory being built by Einson-Freeman in "Industrial Park," Fair Lawn, N. J. The entire plant operation will be supervised by A. H. Schmitz, vice president in charge of all the company's production. L. J. Engel, executive committee chairman, is acting as coordinator of construction.

M. H. Collet has been appointed to the newly created post of transportation and procurement manager of the Forest



Collet

Products Div., Olin Mathieson Chemical Corp. Mr. Collet had been president of Rigesa S.A., a Brazilian subsidiary of West Virginia Pulp & Paper Co. Reporting to Mr. Collet in his new position will be the present managers of the forestry, wood procure-

ment, railroad, purchasing and traffic departments of the Forest Products Div. Mr. Collet will participate in a contemplated expansion program. His headquarters will be in West Monroe, La.

St. Regis Paper Co., New York, is more than doubling the capacity of its recently acquired subsidiary, Chester Packaging Products Corp. of Yonkers, N. Y., and its affiliates, Cheslam Corp. and Chesflex Corp. These companies produce unsupported polyethylene film and laminate and coat polyethylene to cellophane, foil and paper. A new building is being constructed adjacent to the present plant, which is expected to be in production late this summer, and research facilities are being expanded.

Appointment of Don R. Russell as sales representative of the Multiwall Packaging Division in the Minneapolis office has been announced by St. Regis. A pulp sales office has been opened by St. Regis at 18 S. Michigan Ave., Chicago, with Ralph Wehmhoff as pulp representative. The new office will han-

"Stand in"



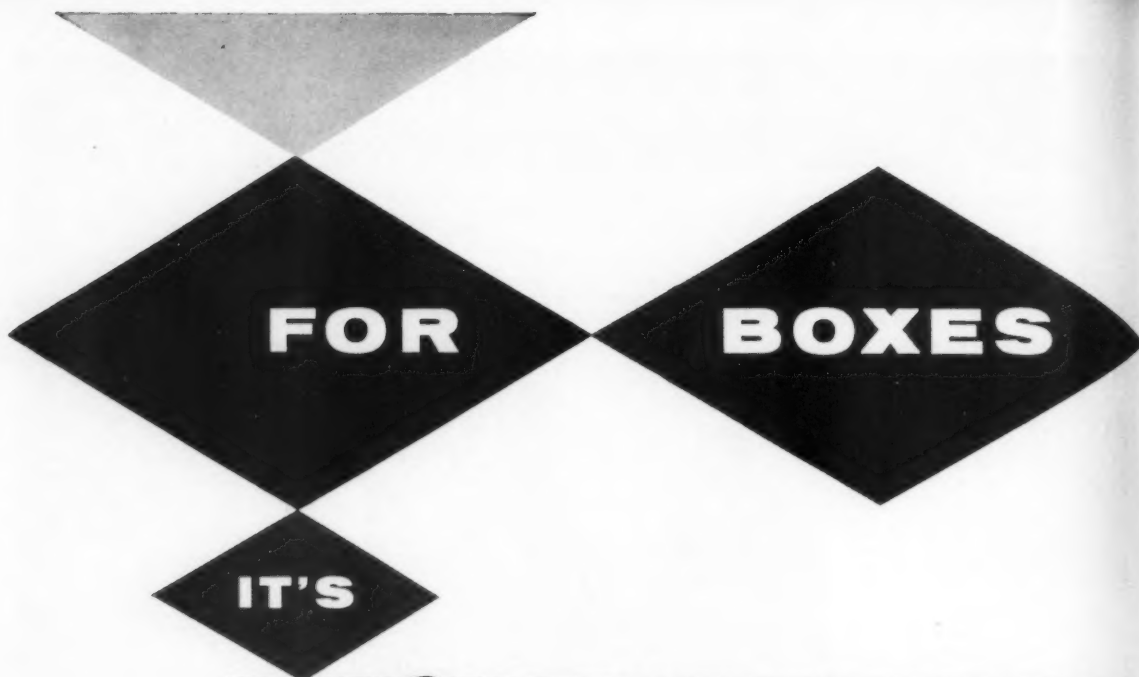
The inside of this H&D corrugated shipping box makes a colorful, compact counter display...or sits on outside section for aisle use. Need a shipper-display idea? See H&D.



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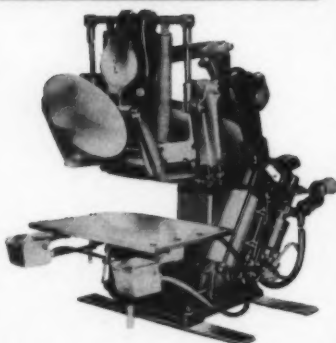
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Plants and people

ble sales of bleached pulp from the Tacoma, Wash., mill of St. Regis and from a new mill under construction in Hinton, Alberta, Canada.

Wayne A. Young has been elected chairman of the board and chief executive officer of The Ohio Boxboard



Co., Rittman, Ohio. Mr. Young has been company president since 1934. Dudley W. Maxon, former executive vice

Young Maxon

president and general manager, is now president and chief administrative officer. J. N. Andrews has been named executive vice president and J. C. Morris is now senior vice president.

The Container Sales Div. of Thatcher Glass Mfg. Co., Inc., Elmira, N. Y., has announced the following changes in assignment: John Ford is being transferred to Chicago; Duane Lewis, container salesman in Eastern New York State, replaces Mr. Ford in the Rochester office. David R. Parfitt, Jr., has been assigned to Albany as container salesman and Harold Sullivan will assume Mr. Parfitt's former duties as assistant to the manager of Thatcher's Beer Container Div. in Elmira. Two new container salesmen have been appointed: Charles A. Fritz, who will headquarter in Louisville, Ky., and Charles R. Butts, assigned to Boston.

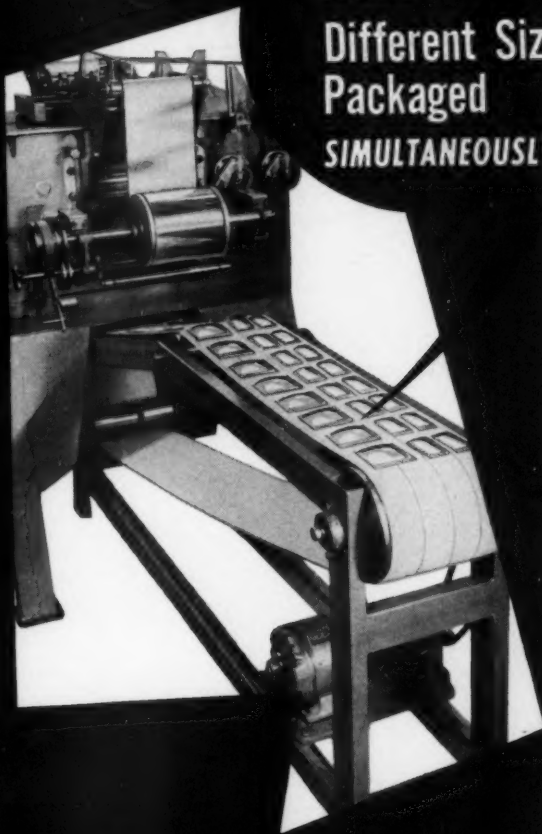
Howell D. Chickering has been appointed Eastern district sales manager for the DuPont Film Dept., with headquarters in Philadelphia. He succeeds Veasey C. Clark, who has retired after 43 years with DuPont. J. B. Phillips has replaced Mr. Chickering as assistant New York district manager.

The multi-million-dollar DuPont plant for manufacture of "Freon" refrigerants and aerosol propellents, now under construction at Antioch, Calif., is slated to be in production about Sept. 1. Initial products to be turned out for the company's "Kinetic" Chemicals Division will be "Freon-11" and "Freon-12."

Directors of Hazel-Atlas Glass Co., Wheeling, W. Va., have elected J. H. McNash chairman of the board and president. Mr. McNash, formerly the chief executive officer of the company, was at his request relieved of the duties and responsibilities of that office. H. G. Lewis, who has been vice president and secretary, was elected executive vice president and delegated the duties of the chief executive officer responsible for the general and active management

Different
Items

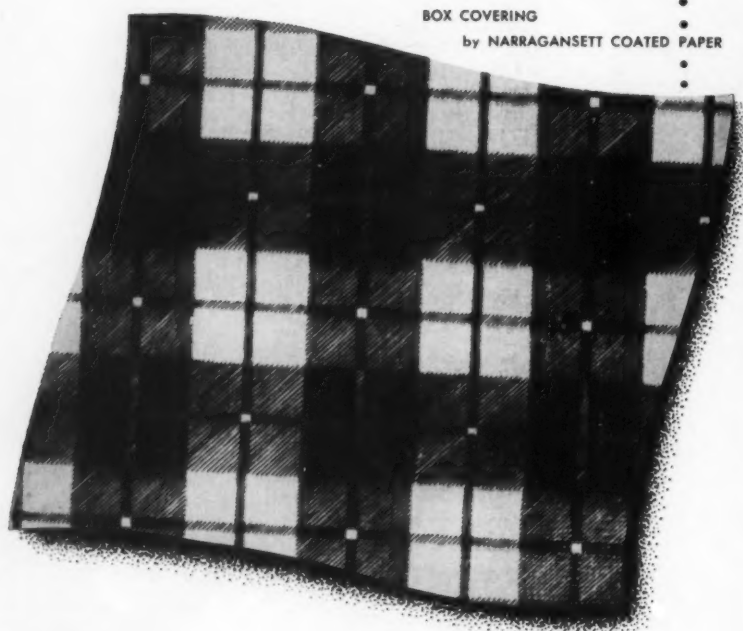
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SIMULTANEOUSLY



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Plants and people

of the business. Norman G. Ross, former treasurer, was elected secretary-treasurer. George R. Worls was elected assistant treasurer and Jack W. Conkel assistant comptroller.

Francis H. Bebee has been appointed manager of Interchemical Corp.'s newly created Commercial Development Dept. Responsibilities of the new department include investigation of the commercial possibilities of new products and new fields. The Market Research Dept., under John Duane, will continue as a separate activity.



Bebee

The Arabol Mfg. Co., New York, has purchased from Dewey & Almy Chemical Co., Div. of W. R. Grace & Co., its current formulas for the manufacture of resin emulsion adhesives. Arabol plans to manufacture the former D & A resin emulsion adhesives in the company's Brooklyn, Chicago, Los Angeles and San Francisco plants and to stock them at its 10 other plants and warehouses. The Arabol company recently celebrated its 70th year of business by opening a new warehouse in Tampa, Fla.

The new Bemis Bro. Bag Co. plant in Flemington, N. J., is now in operation. This new facility for the St. Louis firm



occupies a floor area of 30,000 sq. ft. and will be used for the manufacture of waterproof paper-lined laminated textile bags and burlap bags.

Paisley Products, Inc., New York, has acquired the assets, business and production facilities of Dilco Products, Inc., Redwood City, Calif. The company's new San Francisco area plant will serve as a distributing and service point for the starch, dextrine and water-soluble natural gum products produced by Morningstar, Nicol, Inc., New York parent company of Paisley. Richard Dillinger, former head of Dilco, has joined the Morningstar-Paisley staff in a combined sales, production and managerial capacity. The present Morningstar-Paisley warehouse and office in San Francisco, under the direction of Joe B. Morningstar, vice president of Morningstar, Nicol, Inc., will be moved to Redwood City and consolidated with the new plant. Glues, pastes and adhesives produced by Dilco will be integrated into the Paisley line and the Redwood City plant will also



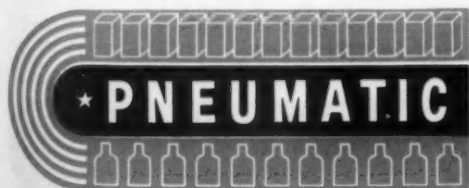
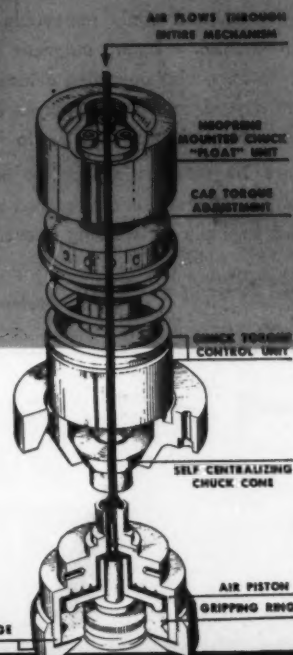
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Right from the time the caps are delivered to the hopper of the Sterling Cap Feeder on the PNEUMACAP, to the moment they're turned onto the container, they're handled with kid gloves. There's no churning or grinding in the feeding operation. Caps "dribble" easily into position, on call from the machine. No jamming to cause scratching or breakage.

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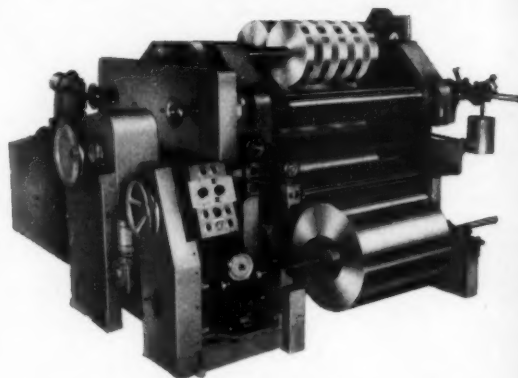
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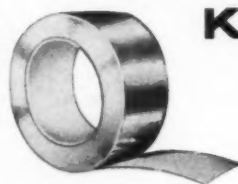
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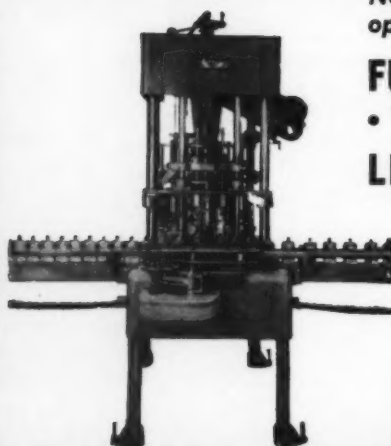


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Plants and people

serve as a distributing point for Paisley's line of polyvinyl acetate emulsions. Plans are being made to augment Paisley's expansion into the West Coast market by increasing production facilities to serve Utah, Portland and Seattle.



Bennett

Robert M. Bennett has been appointed to the newly created position of manager of brewery and beverage packaging, folding carton division, Container Corp. of America, Chicago. Mr. Bennett will continue to work from the company's New York office.

General Mills, Inc., Minneapolis, Minn., will start construction of an addition to its cereal and cake-mix packaging facilities at Lodi, Calif.

J. R. Clements has been appointed vice president and general sales manager of the Raymond Bag Corp., a newly formed division of The Albemarle Paper Co., Richmond, Va.

The Chemical & Pharmaceutical Industry Co., Inc., has moved to new offices at 90 W. Broadway, New York. ChemiPharm, as the company is known, handles imported and domestic machinery for processing and packaging chemicals and pharmaceuticals.

Phillips Chemical Co., wholly owned subsidiary of Phillips Petroleum Co., Bartlesville, Okla., has established a new district sales office of its plastics sales division at Bartlesville to serve Southwestern and Southern states, with R. F. Uber as manager. Commercial production of the firm's Marlex thermoplastic is scheduled to begin during the third quarter of this year at the company's Adams Terminal plant site on the Houston Ship Channel near Pasadena, Tex. A sales service laboratory is under construction in Bartlesville.

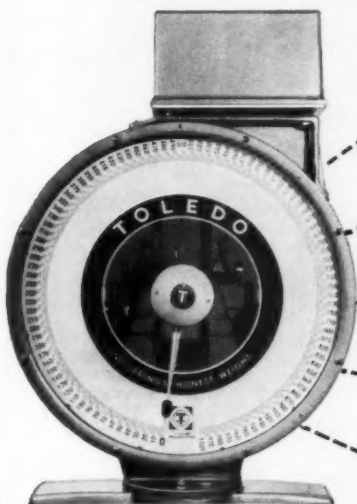
Societe Solvay et Cie, a Belgian firm having an operating office in Italy, has been licensed by Phillips Petroleum Co. to use in Italy the Phillips-developed process for making rigid polyethylene. The Belgian chemicals and plastics firm, with headquarters in Brussels, has been granted exclusive use in Italy of Phillips patents and technical knowledge.

D. W. Thornburg has been promoted to plastic sales engineer in the New York district office to be established this summer by the plastic sales division of Phillips Chemical Co.

Food Machinery & Chemical Corp.'s Canning Machinery Division at San Jose, Calif., has named Robert R. Ball as sales representative for Santa Clara Valley and the San Francisco Bay Area. Mr. Ball succeeds Hubert H. Wagner

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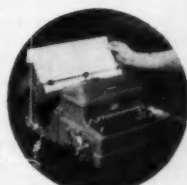
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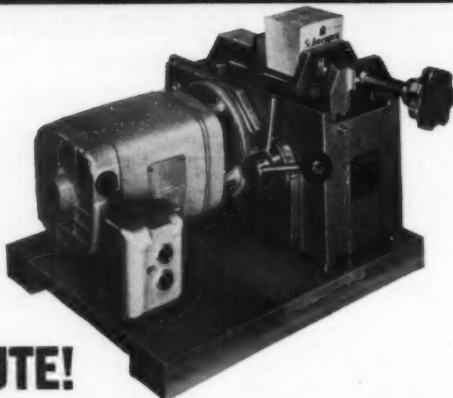
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Plants and people

in the Santa Clara Valley sector. Mr. Wagner is now on the sales staff of FMC's Export Division as supervisor of canning machinery sales. Jack W. Stahl succeeds Mr. Ball as agency and supply supervisor of the division's Western sales department. The Coastal-San Joaquin Valley territory, served by Allen S. Gregory, has been expanded northward to include the Santa Cruz, Gilroy and Atwater areas. The division's branch sales office at Fresno has been discontinued and Mr. Gregory's new headquarters are in San Jose.

FMC's Simplex Packaging Machinery Div. has named John D. Hoffman as works engineer. Mr. Hoffman replaces A. H. Storch, Jr., who has been promoted to the position of FMC-Peerless coordinator with the company's Chicago Pump Div.



Di Franco

Francis R. Di Franco has joined the Conapac Corp., New York, as regional sales engineer. Mr. Di Franco was formerly machine service supervisor with the Olin Mathieson Chemical Corp.'s Film Division and with National Adhesives' Resin Dept.

Following the recent consolidation of Prince Matchabelli, Inc., and the A. D. McKelvy Co., Clarke C. Hambley has been named merchandise manager in charge of packaging, advertising and promotions for Matchabelli-McKelvy.

A new company has been formed in England to manufacture and market Richardson automatic scales and proportioning equipment, according to the Richardson Scale Co., Clifton, N. J. Called Richardson Scale Co., Ltd., it will make all types of Richardson equipment except Richardson Select-O-Weigh systems, which will still be handled in England by Henry Simon, Ltd., Stockport. Managing director of the new firm is J. E. Dewstow. T. A. Shore has been named technical director. Address of the company is 40-42 George St., Nottingham, England.



Gaffney

The New Haven Board & Carton Co., New Haven, Conn., has named Bart A. Gaffney general plant manager. Mr. Gaffney has been associated with New Haven Board & Carton Co., since 1943, his most recent position having been assistant general manager.

R. Reid McNamara, vice president in charge of sales for Sealright Co., Inc., Fulton, N. Y., has appointed a three-man sales development staff consisting

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of C. E. Rondonanski, William J. Scheurer and Roger N. Medearis to help establish the company's packaging products in new fields of the food and non-food industries.

George T. Henderson has been appointed assistant to the president of



Henderson Rowe

The Hinde & Dauch Paper Co., Sandusky, Ohio. Mr. Henderson, who will headquarter in Sandusky, comes from the company's Detroit factory, where he was district sales manager. Harold W. Rowe succeeds Mr. Henderson in Detroit.

Announcement has been made of a change name of the Jagenberg Canadian firm, now to be known as Jagenberg of Canada Limited, 388 Yonge St., Toronto. There has been no change in policy or service from that of the firm which operated under the name of Jagenberg, Turner & Co., Ltd.

Milton J. Goger has been named president of American Type Founders Co., Inc., Elizabeth, N. J., and will direct the company's expansion program. Mr.



Goger

Goger takes over from Louis C. Edgar, Jr., retiring president. Other newly elected officers are William W. Fisher, vice president in charge of sales, to fill the post formerly held by Robert A. Tobias, who has resigned. John Silliman replaces Mr. Fisher as director of operations. The company's expansion plans include the addition of further lines of graphic arts equipment, intensification of research and development, enlargement of sales and service divisions.

The United States Printing & Lithograph Co., Cincinnati, has announced the election of six vice presidents: R. P. Kane, director of special product development; J. Lambie, director of general advertising sales; R. J. Walters, director of carton sales; K. W. Weyer, director of label sales; A. H. Wilhelm, director of finance and budgetary control; K. J. Wollaeger, director of gravure operations. An Administrative and Operating Committee has been appointed, membership of which is composed of W. H. Walters, president, the six vice presidents named above and Howard D. Minnich, director of public relations.

International Paper Co., New York, has announced plans for construction of a newsprint and bleached kraft board mill to be located near Pine Bluff, Ark. The new \$57,000,000 mill will have an annual capacity of 130,000 tons of newsprint and 165,000 tons of bleached kraft board. Plans call for operation of the mill by the end of 1957. The com-

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Plants and people

pany's 115,000-ton newsprint mill at Mobile, Ala., is scheduled to start up in September of this year.

Bert Cole has been elected senior vice president in charge of marketing for the Atlas Plywood Corp., Boston, Mass., replacing C. V. Molesworth, who has resigned. Mr. Cole joined Atlas six months ago. The company's entire marketing activities will now be administered from the company's executive offices in Boston.



Cole

Purchase of the steel lithograph and coating line of Nesco, Inc., Granite City, Ill., by Cain Steel Co. has been announced. The plant, re-named Granite City Metal Decorating Division, is equipped to serve the container industry in coating tin-mill blackplate and tinplate. Services range from prime coating to full-color lithography.

Kenneth K. Krohn has been appointed sales representative in the Los Angeles office of H. S. Crocker Co., Inc. The company's Baltimore plant has been expanded to include a new specialty products department.

John R. Davey has been appointed manager of the metallurgical department, Acme Steel Co., Chicago.

Offices of Richard Max Franz, package designers, are now located at 19801 Pinecrest Dr., RFD 4, Waukesha, Wis.



Frank W. Egan & Co., Somerville, N. J., has appointed James S. Thornton as sales engineer. For the past three years Mr. Thornton has been located in Portland, Ore., where, with John V. Rosland, he was West Coast representative for the Egan Co. Sales and service for the West Coast will now be handled from the company's new plant and main office in Somerville.

Thornton

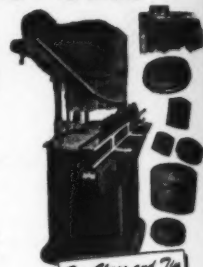
Anchor Hocking Glass Corp., Lancaster, Ohio, will construct a modern steel warehouse structure at its Connellsville, Pa., glass container plant.

Anchor Hocking will also construct a new steel warehouse at its wholly owned subsidiary plant, Tropical Glass & Box Co., Jacksonville, Fla.

Colonial Applicator Co. has opened a new plant at 538 N. East Ave., Vine-land, N. J., to house its executive offices and provide 6,000 sq. ft. of floor space for assembling and finished packaging. The firm's Park Ave. plant has been given over entirely to the manufacture

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CAN YOU AFFORD TO BE WITHOUT IT?
ACT NOW! Send Sample Caps For FREE TRIAL

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56 Rose St., New York 38, N. Y.

of vials, droppers and syringe cartridges, and also houses the firm's silk-screening operations.

Promotion of **Merrit A. Gates** to chief quality and research engineer of the Quality and Specification Dept. has been announced by the Glass Container Div., Owens-Illinois Glass Co., Toledo. He succeeds **Dr. Jo M. Teague, Jr.**, now assigned to the new O-I Technical Center to direct fundamental and material research.



Gates

Anthony Iacono has been appointed plant manager of the new Long Island City, N. Y., packaging plant of the Arner Co., Buffalo pharmaceutical manufacturer. He previously managed the E. R. Squibb packaging division.

Announcement has been made of the formation of **Trans-Atlantic Associates**, 5 N. Water St., Philadelphia 6, Pa. The new firm will serve as sole agent in the United States for **Kautex Works** of West Germany, extruders of polyethylene bottles, closures, tubes and caps.

Following the recent death of **William J. Warner**, president for 24 years of **The Plastic Coating Corp.**, Holyoke, Mass., **Samuel R. Sutphin** has been elected chairman of the board and **Walter V. Shearer** has been named president. **Garrison Householder** continues as vice president. **Richard S. Fay** has been appointed manager of cover and box paper sales for the company.



Sutphin

Santa Ana Container Co., Inc., has been established at 1024 N. Fuller St., Santa Ana, Calif., for the manufacture of corrugated kraft containers. Officers of the new company are **E. E. Jacobson**, president; **C. W. Kyle**, vice president, and **W. F. Call**, secretary-treasurer.

The Orchard Paper Co., St. Louis, Mo., has added a four-color gravure Champlain press to its plant facilities.



Proctor

J. D. Proctor has been appointed as general sales manager of the **Celluplastics Corp.**, Newark, N. J., producer of plastics jars, vials and custom packages. Also announced by the firm is the appointment of **G. F. Plain** as controller and assistant treasurer.

David Benjamin, formerly president of the **Waxide Paper Co.**, Kansas City, Mo., has been named assistant general manager of the waxed paper division of **Crown Zellerbach Corp.**, San Francisco. Other promotions announced by the company are: **George Donald**, from manager, Portland plant, to general sales manager, San Leandro, Calif.; **Moss Barr**, from sales manager, San

Something goes into this box besides disinfectant...

NATIONAL FOLDING BOX
COMPANY DIVISION
FEDERAL PAPER BOARD COMPANY, INC.

SALES OFFICES: CHRYSLER BUILDING, NEW YORK 17, N.Y.; NEW HAVEN AND VERSAILLES, CONN.; BOGOTA, N.J.; BOSTON AND PALMER, MASS.; STEUBENVILLE, OHIO; PHILADELPHIA AND PITTSBURGH, PA.

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Plants and people

Leandro, to resident manager, Portland; Bud Launtz, from superintendent to assistant to the president, Portland; Ernest A. Mitchell, to be staff manager, San Leandro; and Shell Taylor, to be sales manager, San Leandro.



Dilworth

John Dilworth, formerly traffic manager and manager of printed sealing tapes and production scheduling for The Gummed Products Co., Troy, Ohio, is now manager of the company's Sealing Tape Dept. He succeeds Edward F. Herrlinger, II, who recently became vice president in charge of sales.

Harold S. Hart has been made a sales representative at American Viscose Corp.'s Chicago district office and will cover the Indiana-Kentucky territory.



Lee

The R. P. Anderson Co., distributor of packaging equipment and supplies with offices at Dallas, Houston and New Orleans, has appointed Norris E. Lee as service engineer. Mr. Lee was associated for a number of years with the Biner-Ellison Machine Co.

The Dobeckmun Co., Cleveland, Ohio, has been licensed to conduct operations under patents owned by National Research Corp., Cambridge, Mass., relating to continuous vacuum metallizing.

Kidder Press is continuing its expansion program again this year, with the bench and erecting area at Dover, N. H., being enlarged. New, modern, precision-type tools are to be installed.

William J. Canavan has been appointed manager of the Extrusion Materials Div., Bakelite Co., a Div. of Union Carbide & Carbon Corp., New York.

Breo Freeman, Jr., formerly assistant general manager and vice president of the Specification Packaging Engineering Corp., North Hollywood, Calif., has been advanced to vice president and general manager.

Stone Container Corp.'s Eastern Division, Philadelphia, has appointed Raymond M. Levit to handle corrugated box sales in New York and Russell G. Dieffenbach to handle corrugated box sales in New Jersey.

The West Virginia Pulp & Paper Co., New York, is building a forest nursery capable of growing 20 million seedlings annually in Dorchester County, S. C. The company regards this as one of the most significant additions to its

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Flag sales attention to your product with the glitter of foilcraft "Flashmanship" . . . adapt its eye-catching sparkle to your labels, seals, wraps,

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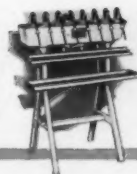
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MODEL B-49 STRAIGHTLINE VACUUM FILLER for liquids and semi-liquids. Most automatic one-operator multiple filler. With or without discharge conveyor. Contact parts of stainless steel; plastics on special order. Adjustable for container sizes from AGST to gallon size finishes. Send for Bulletin B-49.

U. S. SIPHON FILLER. Efficient for all liquids including foamy products or products that do not permit agitation. Stainless steel tubes; acid resistant glass lined tank. Improved model. Adjustable. Write for the Siphon Bulletin.

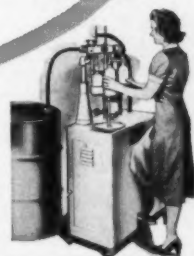


Look to **US** for Every Liquid Filling Requirement

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MODEL B-2 VACUUM FILLER provides continuous production. Two containers always filling while two are placed in position. For liquids and semi-liquids. Vacuum is adjustable, and flow is regulated. Handles containers up to 4 1/4" dia. Fast, efficient. Send for Bulletin B-2.

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Something new and important is always happening tomorrow on the plastics newsfront: new resins, new production techniques, new machinery, new design wrinkles, new applications. Because many of these developments may have direct bearing on your own business, you should know about them as they happen. How?—By subscribing to *Modern Plastics*, the one monthly magazine that gives you blanket coverage of the plastics field with special sections devoted to Applications, Engineering, Machinery, Patents, Technical Developments.

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DOUBLE YOUR SPEED ON SHEET PLASTIC BEADING
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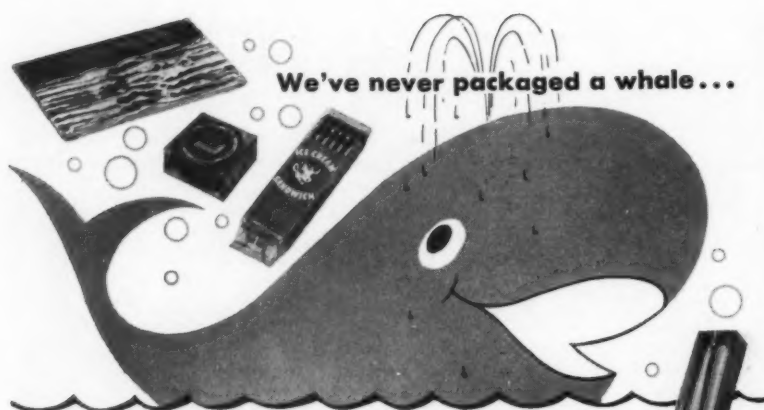
Taber Dual Bearer

Simultaneously beads both edges of plastic sheet, roll, die cut blanks and strips, .005" to .020" thickness, 2" to 20" wide. Nine different beads and Specials! High speed production! Each head can be used independently as a single edge beader if desired.

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But we CAMPBELL WRAP a *WHALE* of a lot of products!

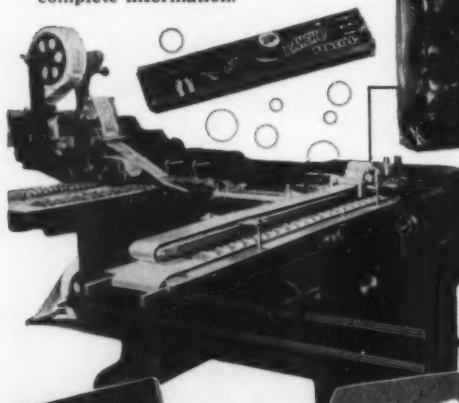
AT A WHALE OF SPEED — with most users reporting from 100 to 300 single or multiple product package units per minute!

A WHALE OF SHAPES AND SUBSTANCES — are Campbell Wrapped too, whether the product be regular or irregular in shape — hard, soft, crisp or fragile in quality. Automatic, continuous rotary operation "float" wraps without damage or breakage.

A WHALE OF MATERIALS — Such as papers, cellophane, polyethylene, foils and all types of the newest plastic film wraps can be used.

A WHALE OF SAVINGS — are effected, too, with elimination of trays or stiffeners, unless desired — minimum wrap fold-over at seams — and one person operation.

A WHALE OF SEALS — By gluing, crimping or heat sealing with ends flared, turned under or diamond folded. **VACUUM SEALING** now also available. Automatic feeds and deliveries of all types. Write for complete information.



Speeds production

— wraps up to 300 units per minute

Cuts labor costs

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For full color brochure telling about the many models of Campbell Wrappers.

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Campbell

WRAPPER

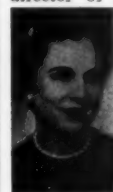
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Plants and people

forest facilities in recent years. The new nursery will be the first owned and operated by the company.

Miss Adalene Stohr has been appointed director of Home Economics for the American Can Co., New York. Miss Stohr, formerly associate food editor of the *Woman's Home Companion*, succeeds Miss Harriet Jean Anderson, who has resigned. Miss Stohr will direct Canco's home economics service to customers (including product, label and container evaluation), direct canned-foods educational programs and food news services.



Miss Stohr

The new Jacksonville fibre box division of the Growers Container Corp., Salinas, Calif., is expected to be completed late in August. Staff members, who are currently working out of temporary offices in Jacksonville, are Russell R. Kynoch, manager of the division; Robert C. Hogeboom, assistant to Mr. Kynoch; Robert A. Robinson, sales manager; William H. Carlton, sales representative.

Selden T. Williams, general manager of A. Schrader's Son, has been named a director of the Scovill Mfg. Co., Inc., parent company of Schrader.



Duemler

Robert F. Duemler, director of sales for Crown Cork & Seal Co., Inc., has been elected vice president of the firm. Mr. Duemler joined Crown Cork & Seal in 1954 as division vice president of sales for the can division and became director of sales in 1955.

Edwin L. Fuerst, design and packaging specialist, has joined Plax Corp., Hartford, Conn., as special assistant to the vice president in charge of sales. Mr. Fuerst will work with Plax's research, development, design and sales departments in a liaison capacity to devise new ways of utilizing existing plastics as well as guide new company developments. Plax has promoted four members of its Research, Development and Engineering Dept.: Grant S. Brown, now manager of research; Robert G. Strauss, assistant research manager responsible for blowware engineering; Richard J. Morcom, assistant research manager in charge of extrusion engineering; Robert L. Doughty, design engineer.



Fuerst

Design with built-in customer benefits



Shape is modern, distinctive

Long neck makes pouring easy

Bottle is easy to hold and shake

From the minute this modern sauce jar is purchased—until the last drop of sauce is used—this jar's design features do a lot to sell customers on the idea of buying again. Its distinctive shape looks well on the table. The long neck makes pouring easy, and its low center of gravity keeps it from tipping readily. Also, its inside contours are designed for quick mixing of the contents when the jar is shaken.

Creative package design can do a lot to make any product more popular. Talk it over with our experienced package designers. Give them a chance to study your package and recommend ways of making it even more marketable. See your Armstrong man or write Armstrong Cork Company, Glass and Closure Division, 5406 Crystal Street, Lancaster, Pennsylvania.



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How does label paper Keep towels fresh and lovely... Indefinitely?

You might think the phrase "keep towels fresh and lovely . . . indefinitely" is a big assignment for a little label. It isn't.

To prove our point we cite the case of the country's leading towel manufacturer.

His problem, briefly, was to give the shopper proper directions for laundering his towels. Cluttering the handsome design of the label with detailed laundering instruction was out of the question.

We suggested he use our famous M-J 534 Peelable Gumming. The handsome label design was printed on the coated side. One line of 6 pt. type was added at the bottom of the label. It read, "To keep these towels fresh and lovely, follow laundering directions on reverse side". On the gummed side, the laundering directions were printed in detail.

The housewife peels off the label. The adhesive leaves no gum on the towel, no stain. She reads the laundering directions and knows just how to keep her towels fresh and lovely . . . indefinitely.

Since using this peelable label, the towel manufacturer has received compliments on the laundering qualities of his towels. He is performing a valuable service for both himself and the consumer. And, needless to say, M-J benefited, too. Millions of towels require millions of labels.

The Sign of The Most Complete Label Line! . . .



Your labeling problem may have nothing to do with towels. However, it does have to do with label paper.

You know from experience that a label is no better than the paper on which it's printed. McLaurin-Jones offers you over 100 years of experience gumming and coating paper, *plus* the most complete line of label papers in the country.

Whatever your label problem in printing or packaging, we welcome the challenge to meet it and solve it.

It's true. A label is no better than the paper on which it's printed.

Specify M-J label paper and you start with the *best!*

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EQUIPMENT • SUPPLIES • SERVICES

POLYETHYLENE BAG MAKER. Illustrated data sheet describes design and operational features of web-fed heat sealing machine that makes side-seamed polyethylene bags in sizes up to 40" x 40". G. P. Schjeldahl Company. (F-651)

POLYSTYRENE CONTAINERS. Data sheets picture line of rigid polystyrene containers in rectangular, goblet and tumbler shapes having good and re-use possibilities. Wilpet Tool & Manufacturing Company. (F-652)

COLLAPSIBLE TUBES. Illustrated brochure discusses steps in the design and manufacture of collapsible tubes; offers suggestions concerning proper tube selection; pictures stock closure sizes and designs; discusses Federal regulations relating to tube capacities. Sun Tube Corporation. (F-653)

SEALING BARRIER MATERIALS. Illustrated literature describes features of jaw-type, heat-sealing unit especially designed for use on coated and laminated barrier materials. Sizes, capacities, dimensions included. Packaging Industries. (F-654)

WEIGH-FILLING MACHINES. Illustrated literature describes operation, construction, special features, specifications and dimensions of company's line of weighing machines for the semi-automatic packaging, bagging and feeding of powdered flake and granular products. The Exact Weight Scale Company. (F-655)

BOX-WRAPPING EQUIPMENT. Illustrated four-page folder describes the "Flexi-Feed" unit—an accessory that attaches to and converts hand-fed box wrapping equipment to semi-automatic operation. New Jersey Machine Corporation. (F-656)

MOLDED PULP PACKAGING. Profusely illustrated folder shows features and advantages of molded-to-product fibre forms for the protective packaging of fragile merchandise, industrial parts and components. Arvey Corporation. (F-657)

LAMINATED WRAP. Data folder illustrates, describes properties, suggests applications and contains instructions for actual use of "Thilco Tuf" reinforced protective laminated wrapping material. Recommended uses for the puncture- and oil-resistant material include the wrapping of furniture, cordage, textiles. Thilmany Pulp & Paper Company. (F-658)

PACKAGING CONVEYORS. Illustrated 4-page folder shows line of single and double belt conveyors designed expressly for the handling of cartons and bags. Dimensions, special features, design details included. Doughboy Industries, Inc. (F-659)

ADHESIVES FOR LABELS. 6-page technical bulletin discusses factors involved in the selection of adhesives for bottle labeling; suggests different requirements called for by various paper stocks and types of labeling equipment. Paisley Products, Inc. (F-660)

DECORATIVE PLASTIC CONTAINERS. Illustrated 4-page bulletin describes and gives specifications and applications for line of stock rigid plastic containers, including rectangular hinged, platformed, and round types—all available in clear or colored polystyrene. Plastic Jewel Company. (F-661)

MULTI-PURPOSE WEB PRESS. Catalog sheet pictures and gives specifications of combination multi-color web printing press that prints by letterpress or flexography and also punches, embosses, slits, sheets and rewinds at speeds up to 400 feet per minute. Beasley French & Company. (F-662)

CAN CLOSING MACHINES. Illustrated catalog sheet describes operation and special features of an automatic rotary can-seaming machine that applies metal closures to round metal or paper-bodied containers at speeds up to 300 per minute. Specifications included. John R. Nalbach Engineering Company. (F-663)

LIQUID FILLER. 8-page illustrated bulletin describes operation and special features of a semi-automatic, straight-line, multiple-head liquid filler suitable for liquids and semi-liquids. Specifications, dimensions and capacities included. U. S. Bottlers Machinery Company. (F-664)

HEAT SEALER FOR BAGS. Illustrative bulletin describes operation, design, construction and specifications of high-speed, rotary heat sealer for heat sealable plastic films that operates at speeds ranging from 315 to 630 inches per minute. Pack-Rite Machines. (F-665)

FILLER FOR DRY PRODUCTS. Illustrated data sheet presents details of a compact, portable volumetric filler with horizontal feed for such dry products as pills, buttons, small objects, granular materials, powders. Applications, specifications, dimensions, and operational details are included. Frazier & Son. (F-666)

AUTOMATIC UNIT PACKAGERS. Illustrated folder gives details on equipment capable of performing an entire packaging cycle automatically: feeding, forming, filling, and heat-sealing packages. Wrap-Ade Machine Co., Inc. (F-667)

BAG FILLING. Complete description and specifications of hand-fed filling machines for bagging textile products, produce, and other items. Designed for use with plastic, paper, or combination bags. Tele-Sonic Packaging Corporation. (F-668)

LABELING MACHINES. Booklet offers specifications and gives operational details of an automatic labeling unit that can be adapted to the labeling of jars, bottles, cans and boxes. Unit will also do two- and three-sided labeling and fancy panel labeling. Alfred Hofmann & Company. (F-669)

PRESSURE SENSITIVE LABELS. Illustrated folder presents eight case histories of labels developed and produced by this company; also presents many samples of actual labels. Ever Ready Label Corporation. (F-670)

LOW-COST IMPRINTER. Illustrated literature describes a hand-operated imprinter that prints on round containers from 2½ inches to 12 inches in diameter, at speeds up to 400 containers per hour. Murco. (F-671)

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EQUIPMENT • SUPPLIES • SERVICES

AUTOMATIC CARTON SEALING MACHINE. Illustrated literature describes features of floor model machine that automatically applies gummed tape to cartons to produce dust-proof, pilfer-proof seal. General Corrugated Machinery Co., Inc. (F-672)

TUBE AND JAR FILLERS. Illustrated 8-page catalog describes company's extensive line of jar and tube filling equipment and such accessory devices as tube closures, crimpers, agitators, tanks, tube trimmers, threaders and conveying equipment. Arthur Colton Co. (F-673)

BOX MAKING MACHINERY. Illustrated brochure describes two models of the "StokesFeed" paper box gluing, feeding and wrapping units. Construction features, operational details, dimensions and specifications are included. Stokes & Smith Co. (F-674)

GUMMED BOX STAYS. Booklet of samples describes company's line of plain and creased gummed stays for boxes, and presents samples of 16 types. Available weights and dimensions are listed. McLaurin-Jones Co. (F-675)

INSTRUMENT PACKAGING. 8-page booklet discusses factors involved in the packaging of delicate instruments and contains detailed information about the properties of rubberized hair and its uses as a cushioning material. Armour & Company, Curled Hair Division. (F-676)

AUTOMATIC LABELER. Illustrated catalog describes operation and construction details of a continuous rotary type single labeler for bottles. Dimensions, specifications, and floor plan of the unit, which has a top capacity of 80 bottles per minute, are included. Standard-Knapp. (F-677)

WRAPPING MACHINE. Illustrated bulletin presents details on a line of automatic wrapping machines suitable for the application of wraps to such baked goods, either in or out of trays, as rolls, doughnuts, sliced bread, buns and cake loaves. Hayssen Manufacturing Co. (F-678)

PACKAGING DISPLAYS. Profusely illustrated 32-page booklet discusses factors involved in the successful selection of corrugated point-of-purchase packaging displays. Hinde & Dauch. (F-679)

PRINTING PRESSES. 8-page catalog pictures, describes operation and uses, presents specifications of line of flat bed, web-fed multiprocess presses and such accessories as perforators, slitters, die cutters, coaters, etc. New Era Manufacturing Co. (F-680)

WEB CONTROLLER. Illustrated bulletin describes features and operation of air-actuated edge guide for web processing operations involving film, foil, paper and other flexible packaging materials. Web Controls Corp. (F-681)

CARTON GLUER. 8-page brochure describes model "LA" carton gluer embodying a side register device designed to eliminate "leakers" at the glue seam. Specifications, dimensions, capacities are included. International Paper Box Machine Co. (F-682)

PLASTIC CLOSURES. Illustrated folder describes company's "Flexcel" line of polyethylene closures incorporating a leak-proof lid that provides a liquid- and airtight reseal on round and cylindrical containers. Buckeye Molding Company. (F-683)

CELLOPHANE TAPES. Illustrated bulletin describes line of plain and colored transparent cellophane tapes and discusses their application for such packaging functions as can sealing, bundling, bag sealing and "combination deals." Minnesota Mining & Manufacturing Co. (F-684)

CLOSURES AND SEALING MACHINES. Catalog describes company's metal line of closures for bottles and jars. Closures include non-threaded and vacuum types. The sealing machines are designed to apply the company's line of caps. Anchor Hocking Glass Corp. (F-685)

SHOPPING HABITS STUDY. Booklet discusses time involved in making purchases of packaged baked goods in self-service markets. Gives figures on types of baked goods purchased, number of products competing for attention, and time consumed in deciding. E. I. du Pont de Nemours & Co. (F-686)

PNEUMATIC PACKAGING MACHINERY. Illustrated catalog describes company's line of pneumatically operated weighers, sealers and wrappers. Equipment discussed includes a carton liner, gross and net weighers and a tight wrapper. Pneumatic Scale Corp. (F-687)

TRANSPARENT SHEETING. 8-page booklet gives technical information about "Ethocel" transparent sheeting. Covers thermal, mechanical, optical and electrical properties, in addition to such factors as moisture permeability and light transmission. Also discusses printing and decorating. The Dow Chemical Co. (F-688)

CARTON STAPLING MACHINE. Illustrated booklet describes floor model, conveyor-mounted stapling machine suitable for both overlap and telescope type corrugated and fiber cartons. International Staple & Machine Co. (F-689)

WRAPPING MACHINE. Literature gives specifications and describes operation of company's "Wrap-O-Matic Model RA" machine, designed for wrapping fragile or irregular-shaped as well as standard products at speeds up to 125 per minute. Lynch Corp. (F-690)

FUNCTIONAL DISPENSERS. Illustrated literature describes extensive line of polyethylene closure-dispensers for bottles, jars and tubes designed for controlled dispensing of drops, pours and atomized sprays. Stull Engraving Company. (F-691)

DRUM PUMPS. Illustrated booklet describes operating features of company's "Fast-Flo" drum pump capable of emptying inks, adhesives, chemicals and other fluids from drums of various sizes. Gray Company, Inc. (F-692)

ANTI-STICK LUBRICANT. Booklet describes company's aerosol-packed silicone spray, an anti-stick lubricant suitable for use on rolls, hot plates, crimpers, gluers and sealers. Injection Molders Supply Co. (F-693)

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MODERN PACKAGING

Village Station Box No. 103

New York 14, N. Y.

Plastics are putting hard sell into packages for soft goods

Modern containers prove their profitability by moving more merchandise

Not many years ago the packaging of soft goods lines was a rare and questioned practice. Today the whole picture is changing.

Accelerating the trend is the availability of new plastic packaging materials that are both versatile and inexpensive.

These materials offer tangible benefits to retailers and to their customers.

Transparent plastic packages, for instance, can show off the contents to the best advantage—yet protect them from handling soilage. (Costly markdowns are eliminated.)

Novel plastic packages with obvious re-use possibilities often give shoppers a potent nudge to buy on impulse.

Colorful plastic packages can give colorless merchandise real display value at point of purchase.

In still other cases, plastic containers can group related items into a single package and promote volume selling.

Pictured on the next three pages are examples of the profitability of packaging soft goods in styrene, polyethylene and cellulose acetate plastics which are supplied by Monsanto. For further information, you are invited to write Monsanto Chemical Company, Plastics Division, Room 651, Springfield 2, Mass.



Monsanto supplies styrene, polyethylene and cellulose acetate for extra-profit packaging



Boxes made of styrene plastic give neckwear new buy-appeal



*Display is improved—
handling is minimized—
costly markdowns are avoided!*

Here's a striking example of how packaging in Monsanto Lustrex is ringing up profitable new business at point of purchase.

When quality neckware is boxed in crystal-clear Lustrex, shoppers stop . . . look . . . and buy.

Patterns and textures display to perfection in the handsome transparent packages. Ties are protected from the careless handling that leads to markdowns. And customers are quick to appreciate the bonus value of the re-usable box.

The neckware cases pictured are molded of Monsanto Lustrex styrene plastic by Bradley Associates, Inc., Chicago.

Lustrex is lightweight, durable, versatile. Every day it is creating more sales-making packages . . . high-fashion containers for luxury merchandise . . . low-cost containers for food, dairy and impulse items.

Monsanto will gladly put you in touch with plastic packaging specialists who will help you work out your container requirements. Write Monsanto Chemical Company, Plastics Division, Room 651, Springfield 2, Mass.

*Talk to Monsanto about
packaging your products in*

LUSTREX*

styrene plastic



*Monsanto also supplies
polyethylene and cellulose
acetate for packaging.*

*LUSTREX: REG. U. S. PAT. OFF.

Showcase made of plastic promotes ensemble selling

Shirt, tie and cuff links are "wrapped as a gift" in a single package!

Things began to happen when boys' shirts were boxed in a lightweight container made of Monsanto Vuepak cellulose acetate.

The package displays a shirt that's as clean and fresh as it was the day it was folded—together with a harmonizing tie and set of cuff links. Sales shot up immediately—stayed up week after week. Dealers sell three items instead of one—and love it!

The package pictured is made of Monsanto Vuepak by C. W. Zumbiel Co., Cincinnati, O. for The Kaynee Company, Cleveland, Ohio.

The unique properties of Vuepak make it an ideal material for low-cost packages. Vuepak has exceptional rigidity—forms easily into almost any shape.

Vuepak is crystal clear and can be both imprinted and embossed. It also combines readily with metal and cardboard.

Monsanto will gladly put you in touch with plastic packaging specialists who will help you work out your own container requirements. Write Monsanto Chemical Company, Plastics Division, Room 651, Springfield 2, Mass.

Talk to Monsanto about packaging your products in

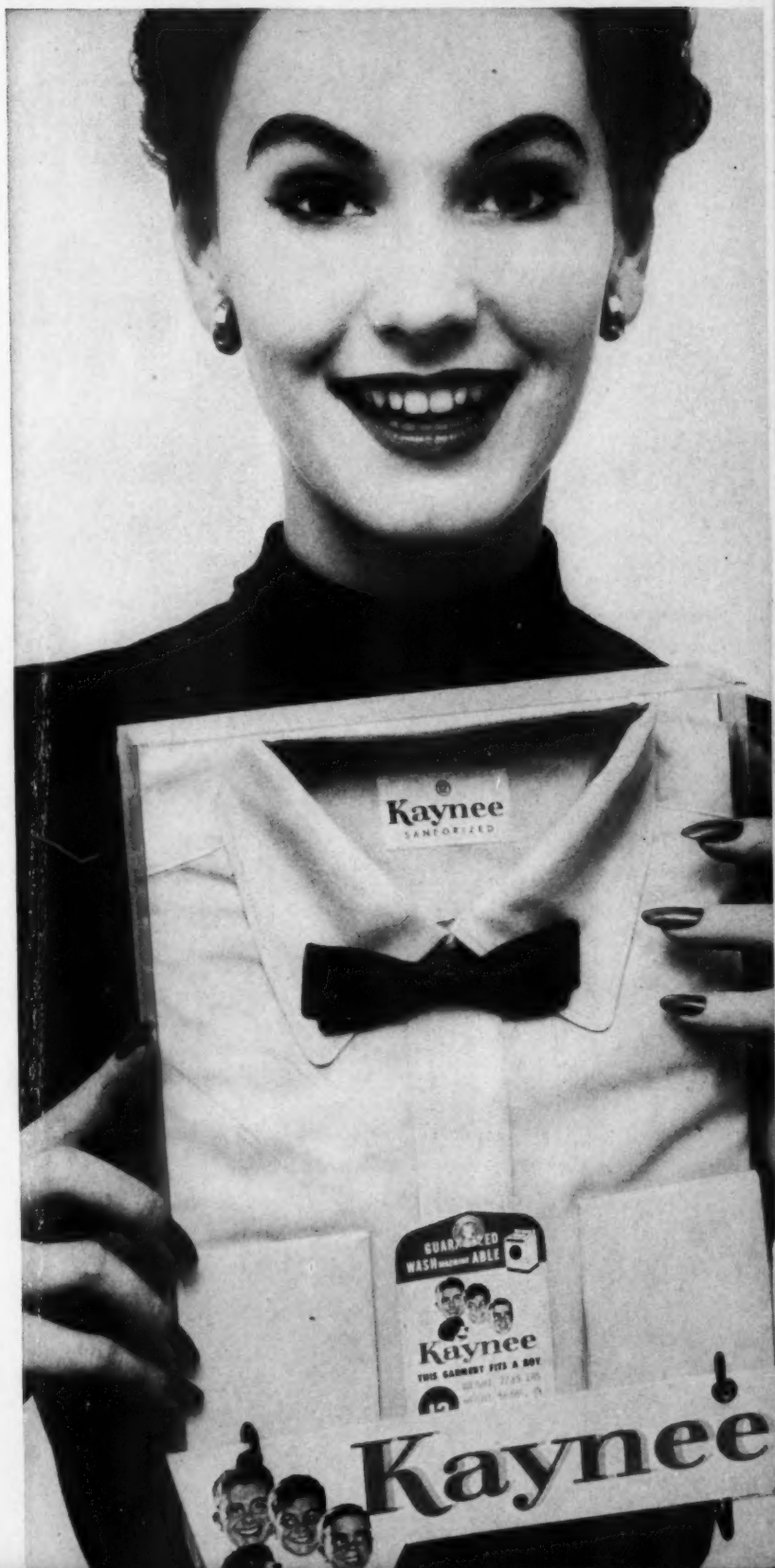
VUEPAK*

cellulose acetate



Monsanto also supplies styrene and polyethylene for packaging.

*VUEPAK: REG. U. S. PAT. OFF.



Polyethylene seals bedding in a protective, luxury package



Shoppers step up their buying—stores cash in by ending costly soilage!

When manufacturers wrap sheets, pillow cases, blankets and towels in polyethylene film, it pays off handsomely in profits.

Durable, flexible polyethylene seals merchandise in a transparent envelope that protects its freshness in spite of handling. No costly markdowns eat into store profits.

Each polyethylene package displays trade names colorfully and can be imprinted with useful product information.

Profitable ensemble buying is encouraged by packaging sheets in pairs with companion pillowcases — by combining bath towels, face towels and washcloths in sets.

No matter how long its shelf-life, polyethylene film does not deteriorate. It doesn't get brittle or discolor under case lights.

Monsanto supplies the polyethylene resins from which highest-quality polyethylene film is made. We will be glad to put you in touch with packaging specialists who will work with you on your requirements. Write Monsanto Chemical Company, Plastics Division, Room 651, Springfield 2, Mass.

Talk to Monsanto about packaging your products in

Monsanto
Polyethylene



Monsanto also supplies styrene and cellulose acetate for profitable packaging

For your information

Stanley L. Wessel of Stanley Wessel & Co. has been elected president of the Point-of-Purchase Advertising Institute, Inc. Mr. Wessel succeeds Donald S. Hutchinson of Lutz & Sheinkman, who becomes chairman of the board. Other new officers include: first vice president—Carl Bergmann of Palmer Associates; treasurer—Harry Fenster of I. Fenster & Sons, Inc.; executive director and secretary—Norton B. Jackson; Eastern vice president—O. H. Stark of Snyder & Black, and Western vice president—Anthony J. Borre of Magill-Weinsheimer Co.

A \$500,000 educational aid program has been established by Owens-Illinois Glass Co., Toledo, Ohio, to benefit colleges, scholars and high school teachers. One feature of the program is an offer of summer employment in the company's plants and research laboratories. Carl R. Megowen, O-I president, reports that the plan is a step toward solving the nation's shortage of qualified science-trained personnel. Starting next fall, the program will provide up to 19 four-year scholarships annually, some worth as much as \$4,000 in total.

The following meetings of the Petroleum Packaging Committee have been scheduled for 1956: June 12-13, Hotel Statler, Boston, which includes a visit to the Quartermaster Research & Development Center, Natick, Mass.; Sept. 13-14, Palmer House, Chicago, with a visit to American Can Co.'s Research Laboratory at Barrington, Ill.; Dec. 4-5, Savannah, Ga., which will include a visit to the Union Bag & Paper Corp.'s Savannah plant.

The National Wooden Pallet Mfrs. Assn. has published a technical pamphlet titled, "What You Should Know About Expendable Pallets," designed to guide pallet purchasers in determining the important principles involved in the construction and use of wooden expendable pallets. Other recent publications of NWPMA include a Technical Handbook on Pallets and Palletization and its Minimum Standard Specifications for Warehouse Pallets. Care and maintenance of wooden pallets is the subject for the association's next publication, to be available about Oct. 1. All of the pamphlets are available without charge from the association, 609 Barr Bldg., Washington 6, D. C.

Philip O. Deitsch, administrative officer of the Waterproof Paper Mfrs. Assn. since its inception some 15 years ago, has resigned from that post. He will continue, however, to serve as managing director of the Gummed Industries Assn., Inc., and the One-Time Carbon Paper Mfrs. Assn. and also as administrative officer of the Industrial Bag & Cover Assn.

A permanent show committee under the chairmanship of R. C. Cragg of the Gould-National Batteries Corp. has been named to supervise rules and policies for the annual National Protective Packaging & Materials Handling Exposition.

This year's show, previously set for Oct. 23-25 at the Kiel Auditorium in St. Louis, Mo., is now scheduled to be held for four days instead of three. Exposition dates will be Oct. 21-24, inclusive, at hours not in conflict with those of the technical short course sponsored by St. Louis University. Exposition hours will be 12 noon to 6 p.m. on Monday and Wednesday, Oct. 21 and 23; noon to 9 p.m. on Oct. 22; 10:30 a.m. to 3 p.m. on Oct. 24, closing day of the event.

The 1956 Manual of Excellent Managements, published by the American Institute of Management, cited Marathon Corp., Menasha, Wis.; Container Corp. of America, Chicago, and Sutherland Paper Co., Kalamazoo, Mich., for excellence in one or more of the institute's areas of management appraisal. All three companies were singled out for noteworthy production records, through both prudent employment of physical facilities and healthy employee relations. Marathon was further named for soundness of internal procedures and lines of communications. Copies of the Manual are available from the American Institute of Management, 125 E. 38 St., New York 16.

A new booklet entitled, "Good Packaging in the 'Hermetet' Carton With the Hermic 6 Packaging Machine," has been published by The Gardner Board & Carton Co. The four-color booklet explains and illustrates the Hermetet carton, which is a lined paperboard package, and gives details of the Hermic 6 machine for making these containers. The booklet also has tipped-in samples of the lined board and of the various materials that can be used as liners. The machine, which is made in Sweden, is distributed through Gardner in the United States. For copies of the booklet, write to The Gardner Board & Carton Co., Middletown, Ohio.

Charles W. Smith of McKinsey & Co. is the new president of the American Marketing Assn. Other new officers include Robert O. Fernald of National Lead Co., national vice president for business activities; Charles C. Squires, Jr., of Fletcher D. Richards, Inc., business manager of the association's official publication, *Journal of Marketing*; Lincoln H. Clark, New York University's professor of marketing, member of the board.

National headquarters of the association have been moved to new, larger

offices at 27 E. Monroe St., in Chicago's Loop.

Acme Steel Co. has announced a new 44-page Steel Strapping Catalog containing constructive ideas to help speed packaging, lower handling costs and achieve safe shipment. More than 65 drawings and photographs show practical steel-strapping applications actually in use today. Acme has also published "Unitizing," a new booklet showing 50 applications of steel strapping to provide faster handling of products, savings in packaging materials, better use of warehouse space and increased product protection. Both of the booklets are available from the Acme Steel Products Div., Acme Steel Co., 2840 Archer Ave., Chicago 8.

The Specialty Papers Co.'s new approach to the development of package designs on overwraps made of paper, foils or films is presented in a new booklet titled, "The Craddock Plan." Background, function and scope of the company's Craddock plan and its advantages to the package user are explained in detail. For copies of the booklet, write The Specialty Paper Co., 802 Miami Chapel Rd., Dayton 1, Ohio.

A "Guide to Films, Periodicals, and Books in Printing, Paper, Publishing, Printed Advertising and Their Closely Related Industries," by Prof. George J. Mills, has been published by the Carnegie Institute of Technology. Copies, priced at \$2 each, are available from

What's doing

June 10-14—The Institute of Food Technologists, 16th annual meeting, Sheraton-Jefferson Hotel, St. Louis.

June 10-14—National Assn. of Retail Grocers, Shrine Auditorium, Los Angeles.

June 10-14—National Confectioners' Assn. of the U.S., Inc., convention and exposition, Hotel Statler, Boston.

June 11-12—American Management Assn., Special Manufacturing Conference, Hotel Statler, New York.

June 11-15—The Society of the Plastics Industry, Inc., annual conference and exposition, Commodore Hotel and Coliseum, New York.

June 17-22—American Society for Testing Materials, annual meeting and exhibit, Chalfonte-Haddon Hall, Atlantic City, N. J.

June 18-20—Grocery Mfrs. of America, Greenbrier, White Sulphur Springs, Va.

July 1-3—National Wooden Pallet Mfrs. Assn., 10th annual meeting, Williamsburg Inn, Williamsburg, Va.

July 10-12—Sixth Western Packaging & Materials Handling Exposition, Pan Pacific Auditorium, Los Angeles.

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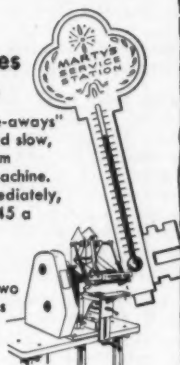
RI-71



MARKEM solved these marking problems

plastic novelties in three colors

Imprinting plastic "give-aways" on a hand press proved slow, poor in quality. Markem suggested their 45A machine. Quality improved immediately, production jumped to 45 a minute per color run. Result was better product, increased business, purchase of two more Markem machines to meet demand.



odd shapes . . . from lollipop sticks to solenoids



Object size, shape or irregularity often makes efficient marking a real problem. Markem's 45AG machine is proving remarkably versatile for marking plumbing fixtures, automotive parts and ignition coils . . . lollipop sticks, recessed lids and brushes. Well worth investigating for any difficult job.

fishing rod imprinting

Advantages of directly imprinting products are typified by a manufacturer who had been using decals on his fishing rods. A Markem 61A machine now imprints 600-700 rods per hour, of varying diameters and lengths. Markem Method saves him time and money, keeps pace with production.



Compare your method of product or package marking with the Markem Method. Write Markem Machine Co., Keene 1, N. H.



For your information

Prof. Mills, School of Printing Management, Carnegie Institute of Technology, Pittsburgh 13, Pa.

The Vacuum Forming Corp. is offering a new illustrated booklet titled, "Management Guide to Vacuum Forming." It describes the principles of vacuum and drape forming of plastic sheet, applications and advantages of the technique, its economics and place in plant management. Copies are available from the Vacuum Forming Corp., 76 S. Bayles Ave., Port Washington, N. Y.

The Can Mfrs. Institute, one of the founding groups of "Keep America Beautiful," will continue its cooperation with that organization. Members of the industry will be urged to cooperate in the program and can manufacturers will be urged to request users of their containers to dispose of empty ones in trash receptacles.

The Waxed Paper Merchandising Council, Inc., launched the most extensive advertising campaign in its history last month, with a total of 233 ads in 10 national publications and 34 trade magazines. The ads are aimed at promoting consumption of waxed-paper-protected foods and illustrate appetite-appealing foods in use protected by waxed paper and glassine.

A revised edition of "The ABC's of Modern Plastics" has been published by Bakelite Co. for those who want to know more about plastics and to develop a better understanding of their use by the public. This digest-sized, 48-page, illustrated booklet describes the making of plastics and plastic products from natural resources into packages, auto bodies, shower curtains and other products. Basic facts on the sources and production of plastics, their spectacular growth and importance in everyday living are given. Copies are available from Bakelite Co., Div. of Union Carbide & Carbon Corp., 300 Madison Ave., New York 17.

The Waterproof Paper Mfrs. Assn. has appointed Dernel Every as its secretary-treasurer. The group's assistant secretary-treasurer is T. K. Heston and Sawyer & Marion will act as counsel. Association offices are now in Room 3000, 122 E. 42 St., New York 17.

Paul S. Willis, president of the Grocery Mfrs. of America, has been awarded the William H. Albert Trade Relations Award by the Super Market Institute. The award was presented for his efforts over a period of almost a quarter of a century to bring about closer cooperation between supplier and distributors. He is the second man in the Institute's history to win the award.

Corrugated Specialties And Accessories From A to Z

- A** (grade "A" corrugated)
- B**uilt-up corrugated pads
- C**hippaflex flexible corrugated
- D**ouble-face corrugated
- E**fficient Chippatubes
- F**rench wrap
- G**lassines
- H**andy Chippamailers
- I**ncomparable Chippa-print Service
- J**iffy wardrobe container
- K**raft wrapping
- L**amp shade cartons
- M**iracle all-corrugated Chippasac
- N**ew-design mirror cartons
- O**utstanding gummed tape
- P**izza boxes
- Q**uick service always
- R**einforced waterproof papers
- S**ingle-face corrugated
- T**urkey boxes
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- Y**our firm name imprinted
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U. S. patents digest

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps not accepted. Edited by H. A. Levey.

Bag-Making Machine, H. S. Allison and F. B. Jewett (to General Mills, Inc., a corporation of Delaware). U.S. 2,737,859, March 13. A mechanism for forming bags and the like from thermoplastic tubular material which comprises a hollow cylindrical bag-forming drum over which a length of thermoplastic material is advanced and having spaced heated wires mounted on drum surface to sever the tubular material into bags.

Method of Manufacturing Tubular Bags, Envelopes and Like Containers With Folded Ends, J. W. Randall (to John Dickinson & Co., Ltd., Hemel, Hempstead, England.). U.S. 2,737,860, March 13. A method of producing a tubular bag with a folded bottom end, including the steps of applying at least one longitudinal seaming stripe of adhesive to at least one of the longitudinal margins of a bag blank.

Cardboard Tube Former and Wrapper, J. F. Thull (to Brown & Bigelow, St. Paul, Minn.). U.S. 2,737,862, March 13. In a rotary device for forming and covering a substantially rectangular-shaped tubular shell member, a vertical rotatable spider member, a circular track having openings formed therein, key means rotatably mounted in openings, means for rotating said spider member, and substantially rectangular-shaped mandrel means mounted on spider in a horizontal plane and formed with a keyway in said track.

Machine for Setting up Boxes From Flat Blanks, W. R. Watson (to Bird & Son, Inc., East Walpole, Mass.). U.S. 2,737,863, March 13. A box-making machine for setting up boxes from flat blanks, comprising a power-actuated press to which the operator presents the blanks for simultaneously securing both ends of the box, power-driven conveyor means for advancing box blanks past gluing and folding instrumentalities to a transfer point adjacent the press.

Heat-Sealing Machine, G. T. Schjeldahl (to Herb-Shelly Inc., Farmington, Minn.). U.S. 2,737,999, March 13. In a heat-sealing machine for uniting sheets of thermoplastic material in a continuous longitudinal seal, the combination of a work-supporting and fold-gripping element having a slot extending therethrough, sides of said slot being movable together for gripping a sheet fold therein and separable for release thereof, a sheet tucking and fixed fusing assembly disposed laterally to work-supporting surface and normally aligned medial clearance with said slot.

Can Package, C. M. Shanahan (to Container Corp. of America, Chicago, Ill.). U.S. 2,738,055, March 13. A can package comprising a can and a holder thereabout, holder comprising a length of

material such as paperboard cut, folded and secured in tube form to provide a pair of substantially oppositely disposed and spaced end-wall panels.

Cartons for Packaging Fruit, Vegetables and the Like, K. T. Buttery (to Sutherland Paper Co., Kalamazoo, Mich.). U.S. 2,738,057, March 13. A collapsible carton comprising a body member including side walls, upper edges of side walls defining a top opening, body member being formed of relatively stiff stock, a relatively flexible transparent top member constituting the entire carton top and having its edge portions fixedly secured to inner sides of side walls in substantially spaced relation to upper edges.

Packaged Surgical Sutures and Method of Preparing Same, W. O. Elson (to The Kendall Co., Boston, Mass.). U.S. 2,738,059, March 13. A catgut suture conforming to a minimum U.S.P. tensile strength suture requirements, said suture comprising a sterile reaction product of a strand of catgut with a solution containing ethylene oxide, the ethylene oxide being 0.01 to 2% by liquid volume of the solution, said reacted catgut having a shrinkage temperature no more than 9 deg. C. below that of the unreacted catgut.

Shrinkable Paper Wrappers for Filamentary Packages, O. A. Batists and C. G. Whytlaw (to American Viscose Corp., Wilmington, Del.). U.S. 2,738,060, March 13. An assembly comprising an annular package of freshly spun regenerated cellulose filamentary material and a shrinkable protective wrapper conformed to the contours of the package and comprising a sheet of paper and paper-like material having a minimum wet strength of 300 gms. and rendered shrinkable by having from 2 to 40% of a substance selected from the group consisting of regenerated cellulose and alkali-soluble, water-insoluble cellulose ethers on a surface thereof.

Dairy Bottle Closure, C. L. Wenzel (to Mid-West Bottle Cap Co., Belvidere, Ill.). U.S. 2,738,089, March 13. A partially pre-formed hood-type milk-bottle cap of laminated form including an outer layer of thin metal foil having a thickness of the order of 0.002 in. and an inner layer of thin foldable sheet material, said cap comprising a flat bottle-mouth spanning portion dimensioned to seat entirely around its periphery on upper face of bottle mouth in spaced relation to its outer periphery.

Dispensing Bottle Cap, M. R. Davis, Arlington, Va. U.S. 2,738,090, March 13. A seal for a container having an outlet through which pourable material may be discharged in the form of a stream, said seal consisting of a

stamped-out disk adapted for manual insertion and re-insertion in said outlet, and having a U-shaped line of weakness defining a tongue which is integrally connected to said disk and forms, when the tongue is lifted to its pouring position, a hinge line between the end portions of U-shaped line, leaving an apertured portion in said disk.

Pallet Box, J. M. Ladd (to General Box Co., Chicago, Ill.). U.S. 2,738,092, March 13. A unitary, wirebound, material-handling box and pallet, comprising a plurality of side walls, a plurality of longitudinally extending strands of wire for securing side walls in assembled relation, and a plurality of floor-supporting cleats secured in aligned relation to sides in spaced relation to bottoms.

Stopper-Inserting Process and Apparatus, V. C. Hall (to Merck & Co., Rahway, N.J.). U.S. 2,738,118, March 13. The process of inserting stoppers into vials which comprises mechanically moving a succession of filled vials to a stopper-inserting position and momentarily stopping each vial.

Mechanism for Folding Container End Flaps, P. E. Fischer, C. H. Swanson and H. E. Wissman (to General Mills, Inc., a corporation of Delaware). U.S. 2,738,714, March 20. A mechanism for folding the end flaps of a container comprising means for supporting a container having end flaps joined to opposing side walls and a cover flap joined to an intermediate wall, at least one folding shoe mounted opposite the container top, first means for moving shoe into the plane of container top in an arcuate motion to fold cover flap against container top, second means for moving said shoe in a path parallel to opposing container walls while first means holds shoe in plane of carton top.

Apparatus for Forming a Carton, O. E. Cote (to Marathon Corp., Rothchild, Wis.). U.S. 2,738,715, March 20. Apparatus for forming a cut and scored flat carton blank into hollow carton form, blank having a bottom wall, front and rear walls hinged to opposite side edges of bottom wall, first, second and third end flaps hinged to opposite end edges of the front, bottom and rear walls, respectively, the second end flaps being divided by intermediate transverse score lines to define outwardly extending retaining flaps hinged to second end flaps.

Container Units and Collapsible Holders for Containers, T. V. Lugt, Jr. (to Sutherland Paper Co., Kalamazoo, Mich.). U.S. 2,738,871, March 20. A unitary package comprising a plurality of cans having radially projecting top and bottom flanges, a carton therefor comprising opposed side walls, opposed end walls, a bottom wall connected to the lower edges of side walls

and a top closure wall connected to upper edges of side walls, end walls being of dimensions between side walls greater than bottom and top walls.

Fruit and Vegetable Container, W. E. Hatch (to Keyes Fibre Co., Portland, Me.). U.S. 2,738,914, March 20. A molded-pulp fruit and vegetable container comprising a substantially square, flat base and four side walls of substantially uniform thickness terminating in upper edge portions defining a generally rectangular open container top.

Closure and Seals for Cartons, T. B. R. Peters, Boulder, Col. U.S. 2,738,916, March 20. A closure and seal for cartons containing a dry, flowable product and provided with a pour hole, said seal comprising a piece of perforated fabric tape longer and wider than pour hole.

Container Partition Structure, J. T. Mader (to Consolidate Water Power & Paper Co., Wisconsin Rapids, Wis.). U.S. 2,738,917, March 20. A foldable partition structure for partitioning the space in a parallelepiped container having opposite side walls and a top and bottom, said partition structure comprising a foldable cardboard partition member having a platform panel and foldably connected outer and inner leg portions, the outer leg portion of said member being adapted to be disposed in plane-parallel relationship to a side wall of the container and a second foldable cardboard partition member having a platform panel and foldably connected outer and inner leg portions.

Apparatus for Making Wrapper With Tearing Strip, J. D. Conti (to American Viscose Corp., Wilmington, Del.). U.S. 2,739,512, March 27. An apparatus for forming a wrapper comprising means for feeding a continuous sheet of wrapper material through a path, means in advance of feeding means for directing a continuous tape of tear-strip material endwise to the continuous sheet and means for pressing a portion of the tear strip adjacent its leading end against the sheet to effect adhesion between said portion and the sheet.

Blank for Flower-Supporting Carton, S. G. Sarrat, Corte Madera and G. Niven, Larkspur, Calif. U.S. 2,739,701, March 27. A blank for forming a carton and flower support comprising: a single, generally rectangular sheet of cardboard having a central portion for providing a bottom wall for the carton and marginal portions therearound for providing two opposed side walls and two opposed end walls extending upwardly from bottom wall when said sheet is folded to form a carton, a series of spaced, parallel folding creases in a row, end creases defining junctures between side and bottom wall.

Package Assembly, J. K. Macomber, Rockville Centre, N. Y. U.S. 2,739,706, March 27. A label package box having a plurality of trays, each tray having a base portion, a row of labels arranged in faced contacting relation on said base portion, each label having at least one wide portion and having at least one reduced portion, each row of labels being on a separate tray.

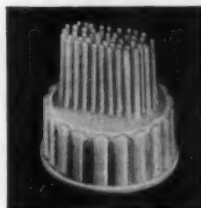
Yarn Packaging Pad and Shipping Container Using Same, J. I. Pritchett and R. N. Markham (to Highland Con-

DISPENSERS CAN BOOST SALES TOO . . .

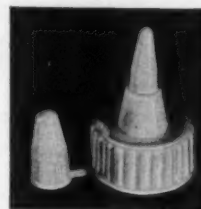


Polyethylene controlled drop dispenser used for E. R. Squibb & Sons "Sweeta" liquid sweetener

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Cap-n-Bristle*—One piece, threaded closure, molded of polyethylene. Perforated base feeds liquid for brush-like application.



Spout-n-Closure*—Spout is molded closed, providing primary seal. Consumer snips the tip open, then applies attached cap for use as a reseal closure.



Cap-n-Closure*—Small cap is attached to head by flexible web, eliminating loss or misplacement. Available as a vertical or side-spray dispenser. Side-spray eliminates tipping and tilting. Just hold container straight up . . . right angle spray can be aimed without effort.

Take the Stull Sealiner all-polyethylene drop dispenser on the Squibb "Sweeta" bottle, for example. Designed by Stull to release precisely measured quantities—two drops are equivalent to one level teaspoonful of sugar in sweetening power—this precise, waste-proof dispenser increased sales considerably.

Stull has developed *controlled dispensing* polyethylene closures for every type of product . . . foods, chemicals, pharmaceuticals, cosmetics . . . dispensing measured drops, completely atomized sprays, free-flowing pours, controlled pours—whatever method makes for easy, economical use.

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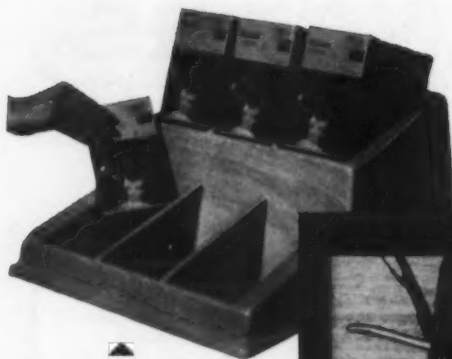
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U.S. patents digest

tainer Co., Inc., a corporation of North Carolina). U.S. 2,739,705, March 27. In combination, a yarn package shipping container and a yarn package pad comprising a plurality of tiers of yarn packages with each package containing a conical core and a winding of yarn thereon and being stacked vertically one above the other so that the apex end of one yarn package core extends into the open base end of the yarn package core immediately above.

Rip-Wire Can Closures, P. Bogner, Rockford, Ill. U.S. 2,739,732, March 27. A can and a rip-wire closure therefor, said closure having a central countersink fitting the mouth of said can and a marginal seaming flanged seamed to can, said flange including a radial portion overlaying the end of can.

Bottle Carrier, W. G. Anderson, Jr. (to American Box Board Co., Grand Rapids, Mich.). U.S. 2,739,735, March 27. A bottle holder and carrier comprising spaced parallel vertical rectangular sides, ends and bottom of bendable material, said ends having integral connection to and at the end edges of one of said sides, said bottom at one longitudinal edge to the lower edge of the same side, a generally rectangular member integrally connected to the bottom at the opposite longitudinal edge thereof located at and substantially covering the inner side of the other of said sides and permanently secured thereto.

Molded-Pulp Egg Carton, J. W. Cox (to The Diamond Match Co., New York, N. Y.). U.S. 2,739,750, March 27. A molded-pulp egg carton comprising a bottom section subdivided into rows of cells of predetermined vertical depth, an inner cover section integrally hinged at one margin to a margin of bottom section and subdivided into rows of cells of vertical dimension less than said cover section cells.

Container, J. I. Pritchett (to Highland Container Co., Inc., a corporation of North Carolina). U.S. 2,739,752, March 27. A paperboard blank for a container, said blank being scored to define a series of four integrally hinged side walls with the scoring arranged to form at least one terminal side wall and the alternately spaced side wall of series with a common taper in the direction of said hinging.

Egg Case Separator, G. S. Wolf (to The Diamond Match Co., New York, N. Y.). U.S. 2,739,753, March 27. A separator device for use in packing filled egg cartons in superimposed relation in a standard-sized egg case.

Reinforced Carrier Receptacle, W. G. Anderson, Jr. (to American Box Board Co., Grand Rapids, Mich.). U.S. 2,739,754, March 27. In a reinforced carrier receptacle, a reinforcing member comprising two spaced, vertical, open, metallic generally rectangular end frames, each having a horizontal bottom section and horizontal metallic side

members connecting said end frames and secured thereto at the upper portions thereof.

Bag, A. F. Ottinger (to Bemis Bro. Bag Co., St. Louis, Mo.). U.S. 2,739,755, March 27. A bag having front and back walls, side gussets and a bottom closure, and further having a finger opening at the top formed by registering recesses in the upper portion of the front and back walls.

Bag Valving and Sleeve Apparatus, H. G. Allen, T. M. Wright and E. R. Kenin (to Multiwall Research Institute, Inc., a corporation of New York). U.S. 2,740,334, April 3. A machine for valving and sleeving gusseted bags comprising a valving station and a sleeving station, means for conveying bags through said stations, said conveying means being adapted to feed a bag into valving station and simultaneously move a bag from the valving station into sleeving station and hold said bags in set position during the valving and sleeving operations.


Container, A. C. Martinelli (to Rogers Plastic Corp., West Warren, Mass.). U.S. 2,740,444, April 3. A container and closure therefor, said container being formed from relatively rigid material and having an upwardly extending side wall with an upper termination in the form of a continuous rim extending therearound, rim extending upwardly from side wall and being offset outwardly relative thereto.

Protective Shipping Case, F. B. Kincaid (to Container Corp. of America, Chicago, Ill.). U.S. 2,740,518, April 3. In combination, an article of sheet form and a shipping case for such article comprising, a two-piece envelope for the article comprising a pair of generally rectangular paperboard liner members having opposed inner faces coextensive with the opposite faces of the article and positioned with one member on each side of the article to sandwich the article therebetween.

Tubular Shipping Container, C. D. Welschenbach (to Hinde & Dauch Paper Co., Sandusky, Ohio). U.S. 2,740,572, April 3. A paperboard box having a tubular body of polygonal cross-section, a separate end closure wall of corresponding configuration disposed within an end of said body with the margin of closure wall spaced from the adjacent side walls of the body, closure wall having a series of separate flaps hinged to the margin thereof in closely spaced relationship entirely about its periphery.

Spacer Construction for Packing Cases, D. G. Laver, Inkster, Mich. U.S. 2,740,574, April 3. An inner packing element for use in a packing case constructed from a unitary piece of flat stock and comprising a rectangularly shaped sleeve adapted to receive the end portion of an article to be packed.


Dispensing Container, R. J. Fontaine, Salem, Mass. U.S. 2,740,575, April 3. A dispensing container comprising an outer cup-shaped vessel having as its upper edge an interior annular groove spaced from the upper edge thereof, an inner container disposed within said outer vessel and having its lower end resting on the bottom of outer vessel and having a flat peripheral flange thereon secured in said annular groove.



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To encourage young designers

Six students received prizes in a competition sponsored by the New England Paper Box Mfrs. Assn. to

Winners and their prize-winning designs were, from left to right: John D. Hough and Homer Mitchell,



encourage practical application of package design in the curricula of New England art schools. Contestants were asked to design original set-up boxes for specified products, planning realistically in regard to cost, manufacture, packing, marketing, display and consumer use.

Yale School of Fine Arts, set-up boxes for selling kitchen utensils as gifts; James Graham and Thomas Sherman, Rhode Island School of Design, boxes for Walt Disney lap trays, and Arthur Eilertson and Robert James, Massachusetts School of Art, containers for heating pads.

TGA holds first packaging session

The recent 21st annual convention of the Toilet Goods Assn. at the Waldorf-Astoria Hotel, New York, was the first TGA convention to devote a session to packaging.

Held Wednesday morning, May 16, the Packaging and Production Session was under the chairmanship of Edward W. Love, production manager of Bristol-Myers Co. Speakers at the meeting and their topics were: Albert R. Jasuta, Bristol-Myers Co., "How a Product Is Developed From a Packaging Standpoint;" Lloyd Adams, Avon Products, Inc., "Production of the Package and Development of the Packaging Line," and William T. Ropp, Pack-It, Inc., "Efficiency and Economy in Packaging Operations."

Mr. Jasuta defined the steps in producing a package as: statement of the problem; presentation of possible solutions; evaluation, testing and preliminary costing; development of sources of supply; final costing; rating of potential packages followed by a choice, and the preparation of specifications. For illustrative material, he drew upon his

company's practice of dividing the work between a packaging committee and a deal packages task group. Membership of both groups is comprised of representatives of the production, purchasing, sales and development departments. Both large groups handle specific development work through subcommittees.

Mr. Adams pointed out ways a small cosmetic plant can operate more efficiently under the general headings of (1) supervision; (2) layout, space and flow of work, and (3) materials-handling equipment. His talk was illustrated with color slides showing how various operations advance from hand methods to fully automatic production.

Mr. Ropp stressed that an attitude of helpfulness among management, sales and production people was a basic step toward more efficient and economical operations. He further explained how the contract packager could function as a pilot plant for trial runs or short runs, or could be employed to relieve a manufacturer of a part or the whole of his production problems.

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Marathon's art design staff has at its disposal volumes of information on design study... they know exactly what it takes to put "eye appeal" into a bread wrapper design and move bread from the retail shelves.



And to make the package design "sing out" your brand name to Mrs. Shopper, it takes a very special kind of paper. Soft, pliable, high-gloss TYTON by Marathon reflects printing brilliantly and faithfully, yet has the strength to withstand the "finger mileage" of constant handling.



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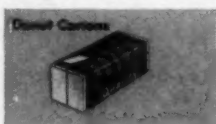
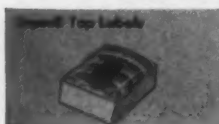
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'How to do it' show planned by PMMI

Tom Miller, president of the Packaging Machinery Mfrs. Institute, describes the forthcoming Packaging Machinery & Materials Exposition of 1956 as "a how-to-do-it show where customers can get answers to packaging problems."

Scheduled for the Public Auditorium in Cleveland on Sept. 11-14, the show will coincide with the Packaging Institute's 18th Annual Forum in the same city on Sept. 10-12. Theme of this year's Forum is to be "Dollars and Sense of Protective

Packaging," which will be treated in open forum discussions, seminars and reports of technical findings by various committees.

The Exposition will place major emphasis on technical aspects of packaging and will be designed as a place where customers find the answers to such packaging problems as selection of machinery and materials, design, controlled filling, adhesives, labeling, inks, etc. Many of the booths will be manned by engineers and technical men.

Effects of fungi on barrier materials

[Continued from page 184]

added to the specimens in order to accelerate the tests and, also, to simulate the conditions of exposure under which barriers are actually used, where traces of inorganic salts are invariably present. In preliminary tests it was found that the development of fungus growth was greatly accelerated when added nutrient salts were present during the incubation of the samples.

The physical appearance of the barrier materials after incubation varied from spotted and delaminated to the development of complete holes in the materials. The most severe damage was evident in the case of susceptible samples after the nutrient salts agar exposure (Fig. 2) and after soil burial. After these exposures, the papers laminated with rubber-asphalt were severely attacked and holes developed in the materials. This type of degradation was evident after only three days' soil burial. In the case of the kraft-polyethylene laminates, the paper layers were attacked, the most severe degradation being evident after soil burial. After soil burial for 11 days, in most cases the paper layers were found to be almost completely degraded, with only the polyethylene film remaining intact. The physical appearance of the barrier materials containing fungicide was good except for some delamination in a few cases.

Effects on water resistance

Preliminary determinations of the water resistance of the various barrier materials by such standard methods as TAPPI Method T433 m-44, "Water Resistance of Paper

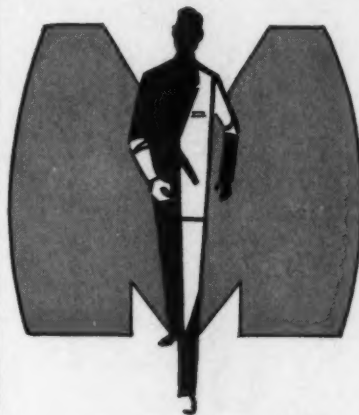
and Paperboard (Dry Indicator Method)," proved unsatisfactory. Since several of these barriers contain highly effective water-resistant films, such as polyethylene, unexposed samples tested in this way would resist water penetration for considerable periods of time, i.e., several months or longer. During this time, the indicator used may change as a result of atmospheric moisture rather than as a result of the passage of water through the barrier material.

The TAPPI method mentioned also describes the use of a Penescope (Fig. 3) for determining water resistance. It is a device which permits a very tight seal to be formed over the surface of the paper and indicator, thus eliminating the effects of atmospheric humidity. In order to make a more rapid determination of the water resistance of the barrier materials the Penescope was used as follows.

It was attached to an accurately machined cylinder and a piston having a face area of 1 sq. in. (inset, Fig. 3). The window of the Penescope consisted of a 2½-in. circle of Plexiglas (⅜ in. thick). Dry indicator as specified in TAPPI Method T433 m-44 was used to indicate the end point (penetration of water through the barrier). The Penescope was then filled with water and pressure was applied to the piston at a steady rate (0.05 in. travel per minute) by use of a Tinius Olsen testing machine. The pressure required for the water to penetrate the barrier material was thus determined accurately and

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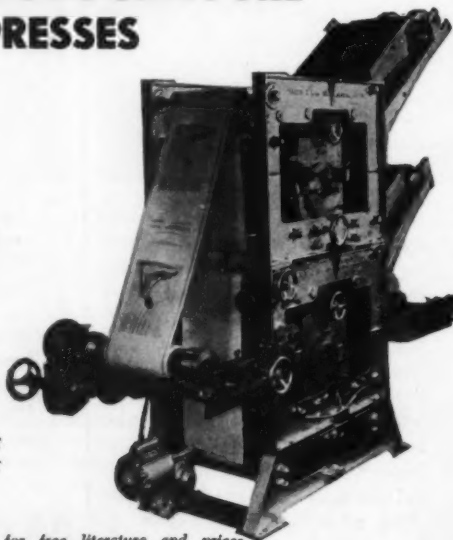
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quickly. In the case of materials possessing a high degree of water resistance, a maximum limit of 250 p.s.i. was set, since the use of higher pressures caused leakage of the Penescope and breakage of the Plexiglas window.

Samples of barrier materials were exposed in the tropical chamber and to soil burial, as described under test methods. After the exposure period, 2½-in. circles were punched out. The edges were coated with a wax mixture (microcrystalline wax 60%, paraffin wax 40%) in order to prevent any water penetration through the edges during the water-resistance test. The samples were tested for water resistance using the modified Penescope pressure method. The results of these tests are listed in Table III.

The kraft-asphalt laminates completely lost their water resistance after only three days' exposure in the soil-burial test. All the paper-polyethylene laminates tested showed no loss in water resistance after the most severe exposures, although heavy fungus growth was present on the paper, except in the case of the barrier material containing fungicide. Thus, it becomes evident that the cellulosic portion of the barrier material is degraded, but the polyethylene film remains intact and retains its original high degree of water resistance. The kraft-asphalt laminates are completely degraded through the paper and the asphalt layers to such an extent that large holes are evident. The barrier (sample N) composed of polyethylene and paper containing a fungicide showed no fungus growth and still retained its original water resistance after exposure to fungi. (Sample R, which had a very thin coating of polyethylene on one side of kraft paper, lost 81% of its original water resistance. The unsupported polyethylene film [PE], 5 mils thick, was unaffected and retained its original water resistance.)

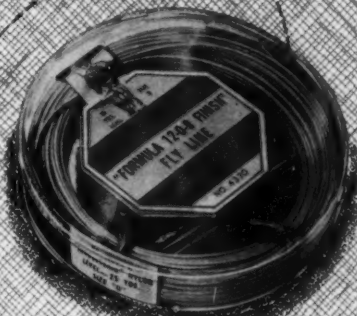
Discussion

In order for a barrier material to be effective it should possess a high degree of water resistance and good mechanical strength even after exposure to deteriorating factors. These properties are determined by the materials used in the manufacture of the barrier materials. Paper

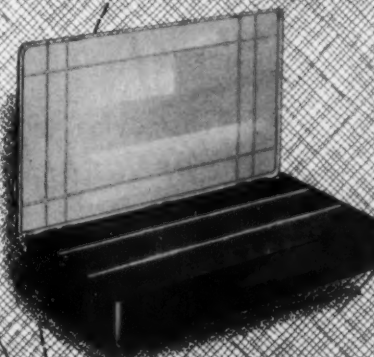


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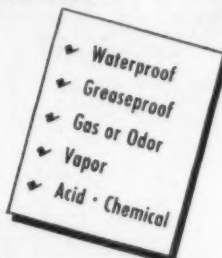


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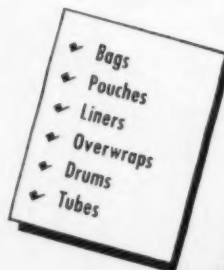
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provides good mechanical strength, but is very susceptible to fungus attack; polyethylene is fungus resistant, but does not possess the required mechanical strength. Therefore, the combination of the two plus a fungicide to protect the paper from fungus attack seems to be a logical approach to the development of suitable barrier materials.

The paper-asphalt laminates are inferior to the paper-polyethylene laminates since they are subject to losses in both mechanical strength and water resistance following exposure to fungi. The paper-polyethylene laminates are subject to loss in mechanical strength only. Both types of barrier materials can be improved by the proper use of fungicides.

The choice of fungicides for barrier papers depends upon several criteria. The desired fungicide should protect all parts of the barrier materials from fungus attack without adversely affecting these materials. Crandall (10), in a report on fungusproofing paper and paper-board, describes mildewproofing agents and methods for their application. The fungicide should resist the effects of leaching with water. It should not decrease appreciably in fungistatic activity during the laminating or sandwiching process, nor upon aging. The desired fungicide should have no toxic or irritating effects on users or workers as a result of handling the treated barrier materials.

The fungicidally treated material should not give off any vapor or dust that may corrode or otherwise undesirably affect the contents of the package. The use of the fungicide should not unduly increase the cost of the barrier materials and the fungicide should be easily applied to the materials. It should be available in commercial quantities from several sources of supply.

Summary

Water barrier materials of the following types were investigated: paper-asphalt laminates; paper or cotton, laminated or coated with polyethylene; metal foil laminated with polyethylene and cotton. After exposure to fungi, paper-asphalt barriers were severely degraded, with a complete loss of water resistance and a considerable loss in breaking strength. Polyethylene

A

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laminated or polyethylene-coated barrier materials decreased considerably in breaking strength, but retained their water resistance. Aluminum foil laminated with polyethylene and cotton scrim behaved similarly. When a fungicide, copper pentachlorophenate, at a concentration of 0.25 to 0.30% based on copper, was incorporated in paper coated with polyethylene, the barriers were fungus resistant and they showed only minor losses in breaking strength after exposure to fungi.

It is recommended that a fungicide be incorporated in the paper and asphalt portions of kraft-asphalt barrier materials and the paper part of polyethylene laminates, and that fungicidal agents and application methods for these purposes be evaluated.

Acknowledgments

The authors express their appreciation to Andrew Zemzik for making the water-resistance determinations. Appreciation is expressed to C. C. Fawcett and E. R. Rechel of the Pitman-Dunn Laboratories and to the Ordnance Corps for permission to publish this paper.

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BEEF	60%	22%
BUTTER	15.5%	81%
CHICKEN	66%	12.6%
CREAM CHEESE	53.3%	36.9%
DUCK	54.3%	28.6%
HAM	42%	35%
MARGARINE	15.5%	81%
PORK LOIN	52%	32%
SAUSAGE	44.8%	41.2%
TURKEY	58.3%	20.2%
VEAL	68%	12%

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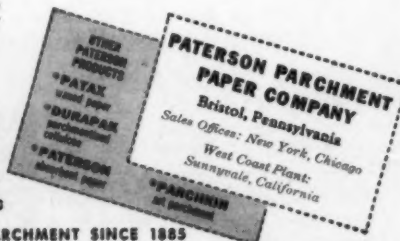
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The department store

[Continued from page 89]

tion right at the point of sale and department stores definitely want more emphasis on this aspect of package design.

Cuts operating costs. Department stores are still looking for packaging that saves money in operating costs: by simplifying inventory and stock control; by saving on wrapping time and materials; by encouraging "take-withs."

While identification and protection are still prime requirements of any package sold through any retail channel, department-store packages, it is believed, need compelling new requisites of *convenience* to the consumer and *convenience* and service to the retailer.

Particular areas in which the recent department-store survey indicated more "creative packaging" is needed are:

Cosmetics	Sweaters and
Household	blouses
textiles	Infants' wear
Toys	Men's furnishings
Lingerie	and
Notions	accessories
Leather goods	Giftwares
Women's	Needlework
accessories	Curtains and
Hosiery	draperies
Shirts	Small
Jewelry	appliances
Housewares	Sporting goods

Although further packaging progress is sought in all of the above product groups, some of the categories apparently have made noticeable progress already. When department stores were asked, in the Folding Paper Box Assn. survey, to identify products now giving them the best packaging, they named:

Cosmetics	Men's
Notions	furnishings
Leather goods	Toys
Housewares	Stretch socks
Towels	Phonograph
Sheets	records
Linens	

The best way for packagers to find out just what department stores are striving for is to observe examples of packages that the department stores themselves have called successful.

A series of capsule case histories with illustrations is presented on

these pages with just that aim in mind.

In the announced purpose of its forthcoming clinic, "to explore the whole subject of packaging face-to-face with suppliers, manufacturers and retailers" and "to determine how more and better-coordinated packaging can sell more of your merchandise," the NRDGA has accepted the packaging responsibility of retailing in its broadest form.

"The stores of the country have been the indispensable channel through which the unprecedented supply of consumer goods has flowed to a seemingly insatiable demand," said Edward F. Engle, manager of the NRDGA sales promotion division, at the Visual Merchandising Session in January. "Our task is a formidable one, since the pressure of goods to be sold working against the pull of consumer demand has put tremendous stress on the ability of distributive-retail pipelines to handle the load."

He pointed out great need for sales stimulation at the point of purchase where customers exercise such wide latitude in their spending powers that economists estimate "customers could do without, or postpone, 40% of the total U. S. production."

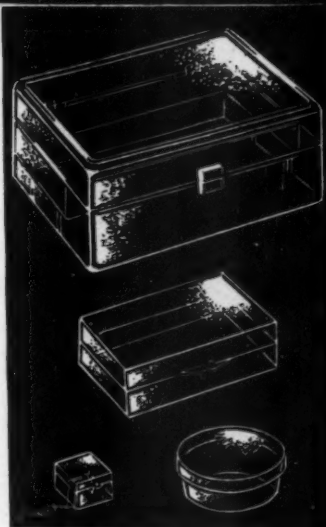
Realization of the truth of that statement, in the midst of all this prosperity, has become the driving force behind the current effort toward better packaging standards for department stores.

New packaging group

First organizational meeting of the newly formed Inter-Industry Food Packaging Committee was held in Cleveland during the annual convention of the Super Market Institute. Designed to deal with broad packaging questions concerning many segments of the food field, the committee includes representatives of manufacturers' associations, retailer and wholesaler groups, package manufacturers and the public.

Merrill Maughan of the Folding Paper Box Assn. of America was elected chairman of the committee at its initial session and plans were laid for future meetings, which will be held approximately every three months and in different sections throughout the country.

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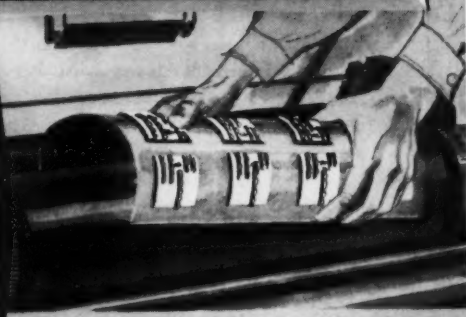
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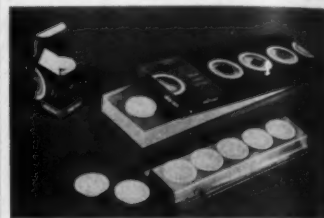
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ing competition at the convention of The National Art Materials Trade Assn. was this "Mix-Eez" package for an aluminum tray and disposable mixing cups, sold by Regush Products Co., New York.

Judges were Robert L. Goldberg, Robert I. Goldberg Associates, chairman; Donald R. Ruther, MODERN PACKAGING; C. Edward Cerullo, True; Bob Nicholson, Sales Management, and George Samerjam, industrial designer.

Packaging in film

[Continued from page 120]

toy items are simply suspended within a continuous tube.

In the next stage, the tubed items pass between an overhead pressure belt and a series of crosswise sealing bars which are circumferentially mounted on a pair of supporting wheels. Each sealing bar carries three nichrome wires—one exposed wire in the center which cuts the individual packages apart and two other wires, mounted beneath a layer of Teflon film—whose function is to heat seal the cut off sections at each end. Actually, each bar simultaneously seals one end of one package and the opposite end of the following package, immediately after the tube is separated.

The cutting and sealing wires do not remain at maximum heat continuously, but receive a timed pulsing current synchronized with the position of the sealing bars. The individual packages are first cut off by momentary heating of the center wire, then immediately sealed as the current is directed into the other wires. At no time during the cutting and sealing process is the movement of the packages arrested.

Possible jamming of the machine at the point where the cross seals

are made is prevented by the use of a microswitch arrangement which automatically stops the machine if one of the packaged items fails to move into proper position between two successive sealing blocks.

To provide for varying package lengths, it is necessary only to alter the spacing of the sealing blocks around the circumference of the mounting wheels. Slots and mounting provisions are provided for this purpose and the change-over to a package of different length requires only a few minutes.

As soon as the packages have been sealed at both ends and cut off, they drop onto a reverse conveyor belt which returns them to the starting end of the machine. At this point they are deposited in receiving trays, ready for the application of the printed paper label.

The saddle-type printed labels are folded by hand around one end of each bag and the bag is held in position beneath a twin-anvil electrically powered automatic stitching machine which not only staples the labels to the bags at two points, but at the same time punches a hang-up hole through the label and bag, for wire display racks. The action of the stapling machines is controlled by foot switches. Dowst is now working on a method of feeding and applying the labels automatically.

The bags are packed in two-piece telescope-style chipboard boxes and assembled in a corrugated shipping container, accompanied by one of the wire display racks. The latter fold flat for shipment.

Upon receipt of the box, the dealer has only to set up the display rack, remove the packages from the chipboard boxes and hang up.

The new polyethylene film packages supplement, rather than supplant, Dowst's other packages. As in the past, the company continues to make extensive use of colorfully printed folding cartons for a number of larger toys and related toy assortments. Other items are shipped in bulk on mounting cards from which they may be removed by retailers for unpackaged display. However, the polyethylene film packages, which were first tested experimentally on a small scale several months ago, have proved so popular that a second automatic packaging machine may be installed soon to keep pace with trade demands.

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So little space

[Continued from page 127]

sealed bottles from the end.

The line begins in one corner of the crowded little room, where bottles are set onto a revolving unscrambler. They are lined up in single file and pass via a narrow conveyor to a vacuum filler, where a portion of liquid product is deposited in each bottle. After being filled, the bottles turn the corner of the L-shaped line and move past automatic machines which apply transparent inner seals and metal screw caps to the bottles. The next stage, a few feet farther on, is an automatic thermoplastic labeler, which heat seals a label onto the body of each glass bottle. Labels are printed on special equipment in the Grumbacher plant.

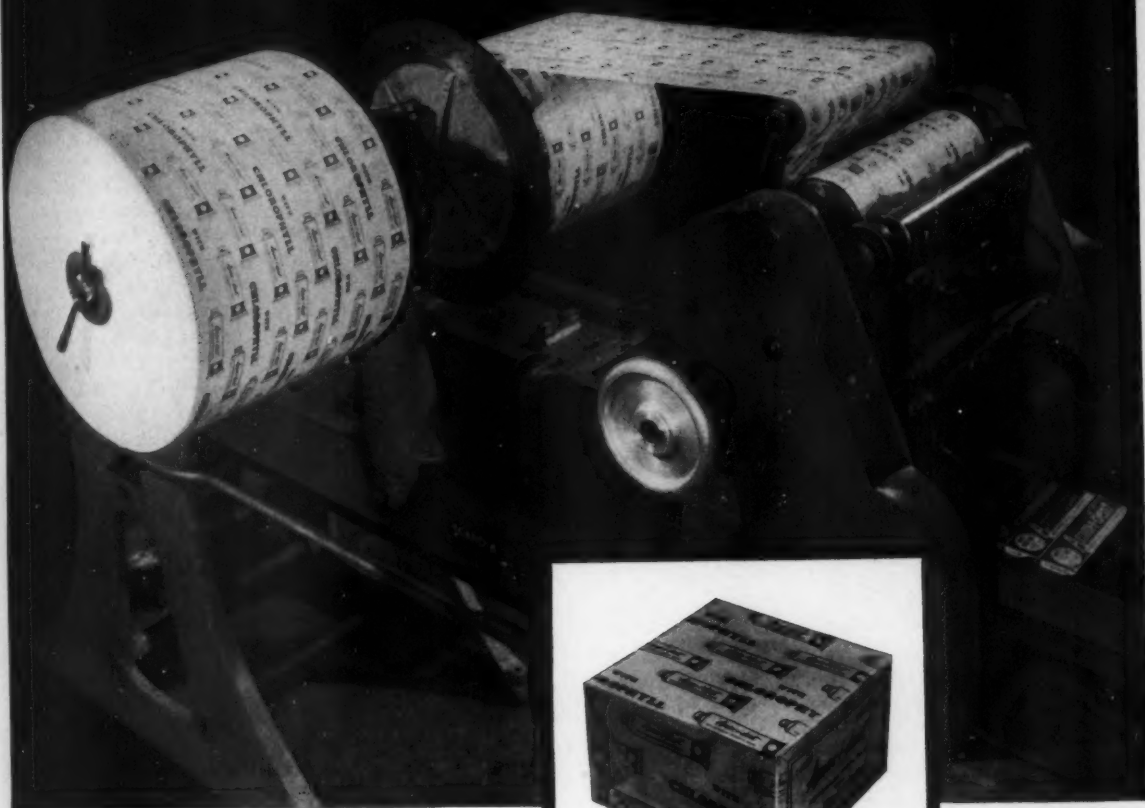
This done, the containers continue along the conveyor to a circular delaying table, where they accumulate. The second operator unloads the bottles from this point and packs them into shipping cartons of a dozen each.

Automatic equipment of this kind—even when crammed into a very small area—has a definite advantage for Grumbacher. Only two operators are needed to do the work for which five were formerly used. Since the liquid products which are packaged here take up only a small fraction of the company's extensive line of artist's supplies and are not packaged continuously, there is very little difficulty with the problem of idle labor.

Gains in packaging speed and efficiency have been outstanding. Grumbacher estimates that the automatic line now in use can do in 2 hrs. what formerly took three days.

The liquid-filling line, incidentally, is just one of several interesting space-saving devices at Grumbacher's. In a room only slightly larger, the company has been able to set up four separate lines for packaging oil colors. Each of these lines, on which the colors are filled semi-automatically into collapsible metal tubes and loaded by hand into small paperboard shipping boxes, is doubled back upon itself in the shape of a "V." In this way, it is possible to cram in both equipment and personnel to run four packaging lines and still have a considerable amount of storage space.

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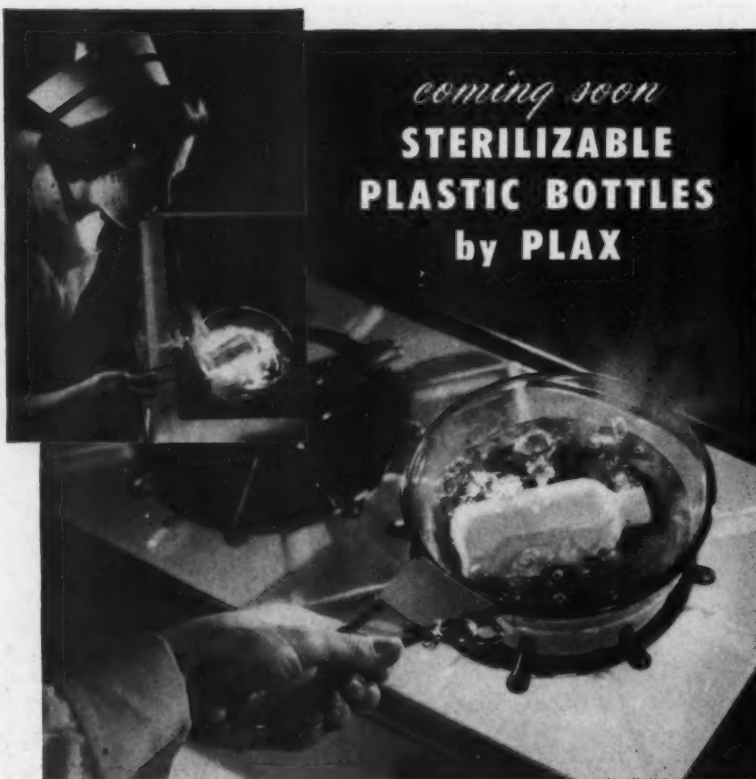


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Food films

[Continued from page 179]

study. A heat-penetration study was conducted on the non-acid foods processed in the water and air-superimposing retort. The thermocouple was fitted into the plastic bag as described in the section on Materials and Methods. A thermocouple was also used to measure the retort temperature.

By a comparison of the temperature at the center of the plastic container with the water temperature in retort, it is possible to gain information related to the time lag that occurs while the center of the bag is raised to the desired processing temperature.

Fig. 7 shows the heat-penetration curves of potato-meat stew packed in Mylar polyester A 300 and Tri-thene A 400. The plastic bags used in the heat-penetration study were 2.5 in. in diameter. It should be borne in mind that in actual heat-processing, the film package of food would not be cylindrical, which would markedly reduce one center distance of the package and in turn shorten the time required to bring the contents of the bag to near the retort temperature. It required 9 to 10 min. for the central temperature of potato-meat stew in Mylar polyester A 300 to be raised to 248-250 deg. F., while 11 to 12 min. were needed to bring the central temperature of potato-meat stew in Tri-thene A 400 to 248-250 deg. F. (Fig. 7).

However, it should be borne in mind that 5 minutes were required to raise the retort temperature to 250 deg. F.

In this study, the processing time used for non-acid food in the water and air-superimposing retort was 30 min. Since the come-up time for both types of film containers ranged from 9 to 12 min., the center temperature of the packaged food should remain at 248 to 250 deg. F. for a period of at least 18-21 min. This should be entirely effective for the sterilization of this non-acid food.

Summary and conclusions

Two screening tests were designed to eliminate or to screen out films which might show some apparently undesirable characteristics for food-packaging uses. The first screening was a test for heat resistance and

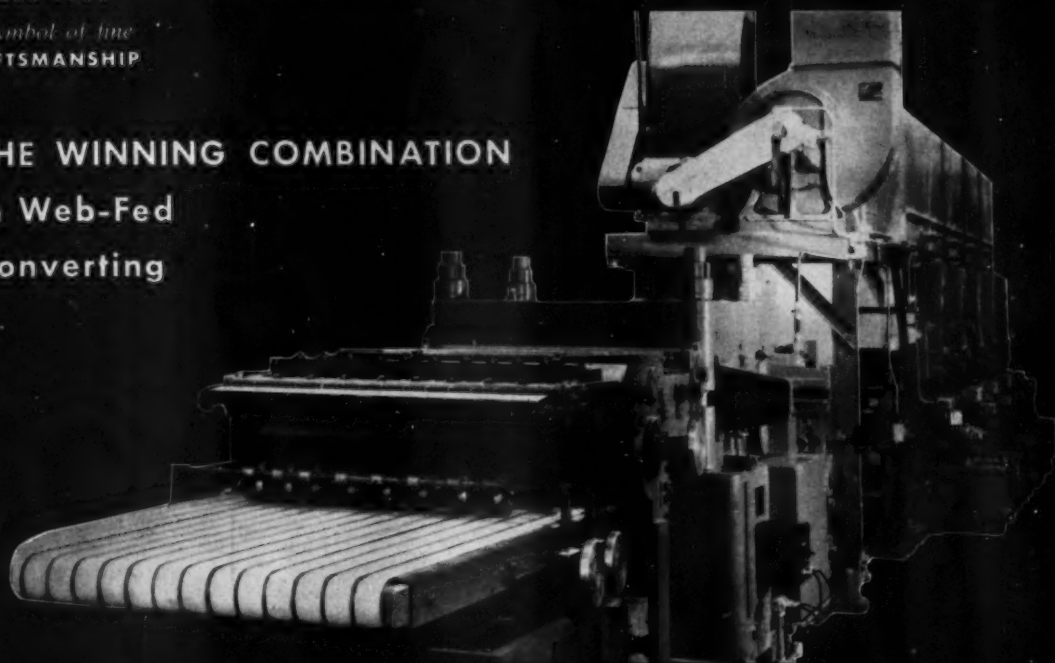


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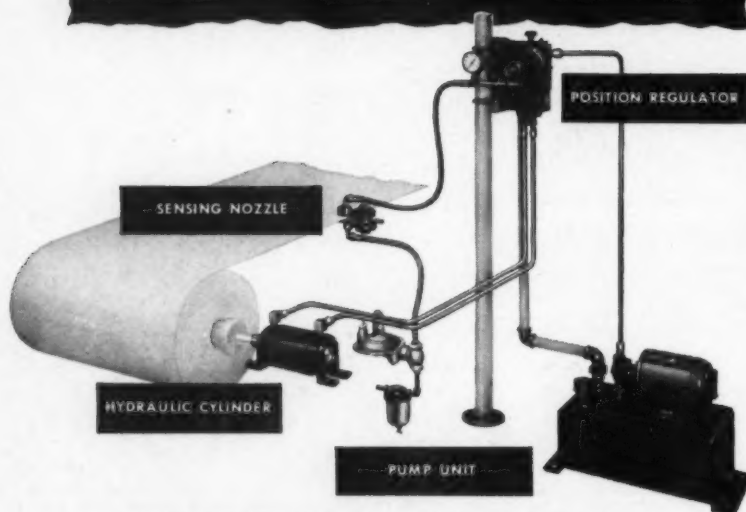
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the second screening test was for taste and odor of the plastic and the turbidity and taste of the boiled water in which the plastic sample had been immersed and boiled for 30 min.

From the results of the first screening test, three of the films were eliminated because they were either broken apart or the surface had peeled off. From the results of the second screening test, another three films were eliminated, mainly because the taste of the water in which the samples had been immersed and boiled was unacceptable. Teflon was omitted because it was available only in sheet form and could not be satisfactorily heat sealed. Therefore, Mylar polyester A and Trithene A were the only two that remained for further heat-stability and food-packaging tests.

Trithene A displayed a lower and Mylar polyester A a higher water-vapor-transmission rate than did Saran A517 of the same gauge. Neither the Trithene nor the Mylar showed an important increase in water permeability after exposure to steam at 250 deg. F. for 30 min.

The weight losses from applesauce packaged in Mylar and Trithene paralleled the water permeability shown by the dish method for each film. However, in each case the packaged applesauce showed a little more weight loss than that predicted from the dish-method water-permeability determinations.

The permeability of the two films to oxygen and carbon dioxide was very low and remained thus after exposure to 250 deg. F. for 30 min. The same was true with regard to organic-vapor permeability.

Applesauce packaged in both Mylar polyester A and Trithene A developed a brownish-black color after five to seven days' storage at room temperature. The addition of ascorbic acid to the applesauce packed in plastic film prevented the development of off-color and off-flavor during a 26-day storage period. Moreover, the regular applesauce packed in plastic film which was then enclosed in a tin can and the air space between the can and the plastic bag filled with applesauce showed no off-color and off-flavor development during the same storage period.

Tomato juice packaged in Mylar polyester A 300 became darker in

color than that packaged in Trithene A 400 after 45 days' storage. The Mylar-packaged tomato juice placed in a tin can and surrounded with tomato juice yielded a much brighter red color than the juices packed in the same film and exposed to air. This also seemed to indicate that the permeated oxygen from the air was the cause of color darkening of tomato juice.

Potato-meat stew packaged in plastic bags was quite acceptable both initially and after storage for 50 days at room temperature. Club steaks were successfully packaged in Mylar polyester A 300, processed and stored at room temperature.

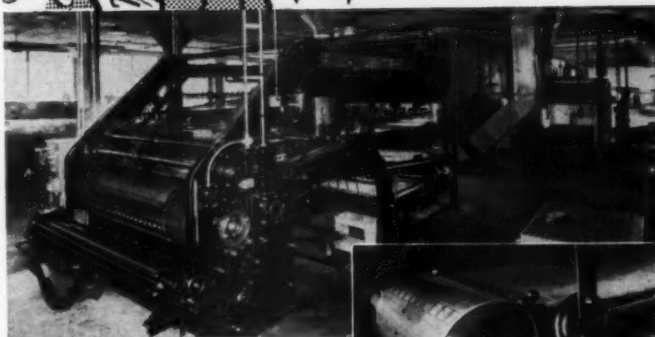
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Paper products

[Continued from page 99]

Doeskin Products, Inc., at one time put the backing boards of its pocket packages to work by imprinting them with historical points of interest, aircraft and other subjects—the familiar "trading-card" approach. The handy pocket packs for tissues sold by various producers have found an extensive "plus" market in convenient dispensers which clip onto auto sun visors.

In the packaging of bathroom tissue, a very pronounced trend in recent years has been toward upgrading of the product through more attractive wrappers. Some manufacturers are utilizing rotogravure-printed cellophane for the individual rolls; this treatment shows off to particular advantage in wrapping rolls of pastel-hued tissue.

However, perhaps the most important trend in bathroom-tissue merchandising, so far as packaging is concerned, is the swing to multiple packaging of three, four or six rolls of tissue. According to International Cellucotton Products Co., which recently introduced a new "4-Pack" overwrap for its Delsey toilet tissue, the new package unit cuts stocking time 75% and has upped sales 24% in test markets.

Thus, with all types of disposable paper products, packaging is called upon for a major role in winning broader distribution for the items and meeting new market requirements. Disposable paper products appear destined to play an ever more important part in our daily lives. Although research and better production methods will doubtless bring further improvement of the products themselves—and may well witness the development of entirely new types of disposable paper products to make life pleasanter and more convenient—alert manufacturers will continue to set a good example in packaging with functional packages aimed at maximum sales and merchandising impact.

CORRECTION: Erroneous information from the source identified the carton used for Sun-n-Bug insect repellent cream (April, p. 108) as having been manufactured by the Robert Gair Co., when in fact the credit should have gone to the Green Bay Box Co., Green Bay, Wis.

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FOR SALE: Corley-Miller Wrapping Machine, Model MPUS-30-1-RG including individual thermostats, and a 30" sheet attachment. Purchased new in 1954 for \$3940. Corley-Miller Sheeter Gluer, Model BL-36 2004. Complete with electric eye attachment 96" conveyor, extra set running glue wheel covers. Purchased new in 1954 for \$5560. Substantial Savings—Contact The Art Award Company, 390 Wythe Avenue, Brooklyn 11, New York.

FOR SALE: Whiz Packer Filling Machine—Model B 2—Practically new \$500.00. Exact Scale—Over and Under Weight—\$35.00. Roth Noodle Co., 7224 Kelly St., Pittsburgh 8, Pa.

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FOR SALE: One Roto Poly bag machine, Model PO-2, also two Roto Cellophane bag machines, complete with formers and gears. May be seen in operation. Box 440, Modern Packaging.

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SALES APPLICATION ENGINEER: With frozen food packaging experience, for large packaging machinery manufacturer. Sales experience not necessary. Mechanical or Industrial Engineering education and experience useful but not necessary. Excellent opportunity for growth and income in expanding field. Principal travel area—Midwest. Box 426, Modern Packaging.

MIDWEST CONVERTER: Supplying Polyethylene and other flexible packaging materials since 1911, has several openings in territories exclusive of East and West coast. Commissions paid on all sales in territory. Reply, giving lines carried and manufacturers represented. Box 431, Modern Packaging.

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SALESMEN: Established converter and printer of cellophane, polyethylene and film. Territories open in metropolitan New York, metropolitan New Jersey, Boston, and Pittsburgh. Plant located in New York. All replies confidential. Box 439, Modern Packaging.

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Leading Chicago Plastics manufacturer, diversifying into packaging field with new materials and processes, seeks man to head sales. Must have packaging sales experience, ability to build sales organization, and be able to recognize potential of, and adapt newest materials and techniques, to packaging field. Excellent opportunity for right man. Give complete details first letter. All replies confidential. Bernard Edward Company, 5252 South Kolmar Avenue, Chicago 32, Illinois. Attention: Mr. D. Lovitz.

SALES REPRESENTATIVES: Wanted by Eastern printer and converter of polyethylene bags. Unusual bag constructions and profit sharing commission make excellent income opportunity. Reply giving lines carried, manufacturers represented and territory desired. Box 436, Modern Packaging.

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By long established manufacturer. Excellent opportunity for salesmen to sell Polyethylene and Vinyl Extrusions. Newly developed extrusions and special facilities meet all industrial needs. Some choice territories still available. In stock service, custom work, fast deliveries. Attractive remuneration arrangement. We are interested only in people who have established contacts for extrusions. Box 435, Modern Packaging.

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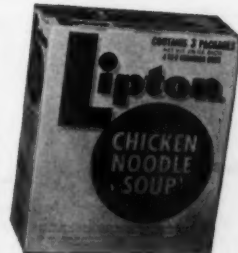
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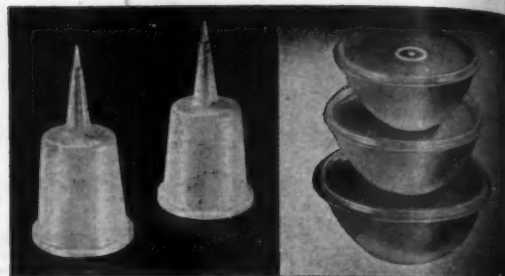
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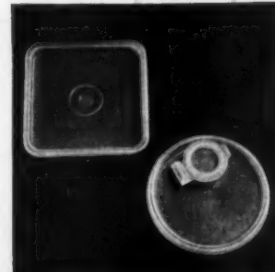
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